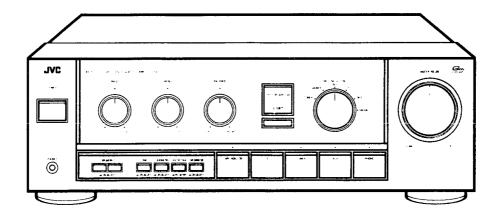
JVC-00484

# JVC

# SERVICE MANUAL

### STERROUNTERPATED AMBURER

# MODEL No. AX-511BK



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### **Safety Precautions**

- The design of this product contains special hardware and may circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- 2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- 3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by ( ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
- 4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
- 5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

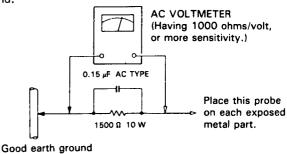
Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
- · Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500  $\Omega$  10 W resistor paralleled by a 0.15  $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



### Warning

- 1. This equipment has been designed and manufactured to meet international safety standards.
- 2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
- 3. Repairs must be made in accordance with the relevant safety standards.
- 4. It is essential that safety critical components are replaced by approved parts.
- 5. If mains voltage selector is provided, check setting for local voltage.

### **Specifications**

```
AX-511BK
OVERALL CHARACTERISTICS
Output power:
   120 watts per channel into 4 ohms at 1 kHz
   80 watts per channel into 8 ohms at 1 kHz
   (DIN).
   75 watts per channel, min. RMS, both
   channels driven, into 8 ohms from 20 Hz
   to 20 kHz, with no more than 0.007% to-
   tal harmonic distortion. (U.S.A. and Cana-
   da only)
   75 watts per channel, min. RMS, both chan-
   nels driven, into 8 ohms at 1 kHz with no more
   than 0.003% total harmonic distortion. (meas-
   ured by JVC Audio Analyzer System)
                     : 0.007% (20 Hz —
Total harmonic
                       20 kHz, 8 ohms) at
 distortion
                       75 watts
                     : 0.007% (60 Hz : 7 kHz
Intermodulation
                       = 4:1, 8 ohms) at
 distortion
                       75 watts
                     : 5 Hz — 50 kHz (IHF, 0.05%, 8 ohms both
Power band width
                      channels driven)
5 Hz — 80 kHz +0,
Frequency response:
                       -3 dB (8 ohms)
                     : 90 (1 kHz, 8 ohms)
Damping factor
Input terminals
 Input sensitivity/
 impedance (1 kHz)
                       2.5 mV/47 kohms
  PHONO (MM)
PHONO (MC)
CD/AUX/
                       200 μV/100 ohms
                       200 mV/43 kohms
  TUNER/TAPE 1, 2
Signal-to-noise ratio
                       85 dB ('66 IHF)
   PHONO (MM)
                       66 dB ('66 IHF)
  PHONO (MC)
                      : 104 dB ('66 IHF)
  CD/AUX/
  TUNER/TAPE 1, 2
  PHONO (MM)
                     : 81 dB ('78 IHF)
   (REC OUT)
   PHONO (MC)
                     : 73 dB ('78 IHF)
   (REC OUT)
   CD/AUX/
                     : 76 dB ('78 IHF)
   TUNER/TAPE 1, 2
  (SP OUT)
PHONO (MM)
CD/AUX/
                      : 67 dB (DIN)
                      : 68 dB (DIN)
   TUNER/TAPE 1, 2
Tone controls
                      : TREBLE: +8 ±1 dB
                                  -8 ±1 dB
                                 (at 10 kHz)
                                 +8 ±1 dB
-8 ±1 dB
                       BASS:
                                 (at 100 Hz)
                     : +6 dB (at 100 Hz)
Lourness controls
  (Volume control at
   -30 dB position)
```

**EQUALIZER** 

PHONO overload

capacity
PHONO (MM)
PHONO (MC)

: 100 mV (0.02% THD) : 8 mV (0.04% THD)

PHONO RIÀA deviation

PHONO (MM)

: ±0.3 dB (20 Hz --

20 kHz) : ±0.5 dB (20 Hz — 20 kHz) PHONO (MC)

Recording output Output level/

impedance TAPE REC-1, 2

: 200 mV/Maximum

1 kohms

**GENERAL** 

Dimensions

: 435 (W) x 147 (H)

x 356 (D) mm (17-3/16" x 5-13/16" x 14-1/16") : 9.3 kg (20.5 lbs.)

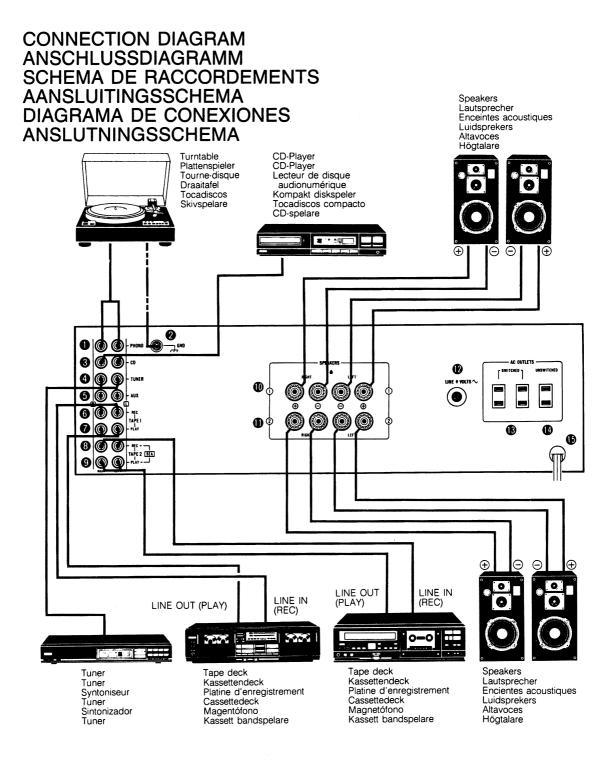
Weight

Design and specifications subject to change without notice.

#### **POWER SPECIFICATIONS**

Areas	Line veltage 8 fraguency	Power consumption  AX-511BK		
Areas	Line voltage & frequency			
U.S.A.	AC 100 V a 60 Hz	400 watts/		
Canada	— AC 120 V ∼, 60 Hz	500 VA		
U.K.	AC 040 V a 50 H-	000		
Australia	— AC 240 V ∿, 50 Hz	680 watts		
Continental Europe	AC 220 V √, 50 Hz			
Other areas	AC 110/127/220/240 V ∼ selectable, 50/60 Hz	290 watts		





#### REAR PANEL

- PHONO terminals
- GND terminal If your turntable has a ground lead, connect
- it to the GND terminal.
- CD terminals
- TUNER terminals
- AUX terminals
- TAPE 1 REC terminalsTAPE 1 PLAY terminalsTAPE 2 REC terminals
- TAPE 2 PLAY terminals
- SPEAKERS 1 terminals
- SPEAKERS 2 terminals
- AC line voltage selector (LINE \( \text{VOLTS} \( \times \))\* SWITCHED AC OUTLETS\*\*
- UNSWITCHED AC OUTLET\*\*
- Power cord

(\*Not provided on units for U.S.A., Canada, Continental Europe, the United Kingdom and Australia.)

(\*\*Not provided on units for Continental Europe, the United Kingdom and Australia.)

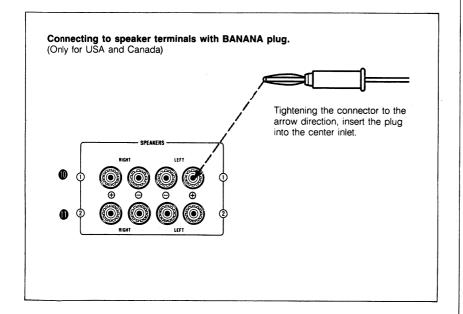
#### Notes:

- 1. Switch the power off when connecting any component.
- Connect source components with left and right channels connected correctly. Reversed channels may degrade the stereo effect.
- 3. Connect speakers with correct polarity; (+) to (+) and (-) to (-). Reversed polarity may degrade the stereo effect.
- Connect plugs or wires firmly. Poor contact may result in hum.
- 5. Do not connect the power plugs of components which have a total power consumption exceeding the value indicated on the rear panel.
- Use speakers with the correct impedance. The correct impedance is indicated on the rear panel of the AX-511BK/AX-611BK.
  7. The SWITCHED AC outlets are switched
- off when the front-panel POWER button is switched off.
- 8. The UNSWITCHED AC outlet is not switched off when the front-panel POW-ER button is switched off.

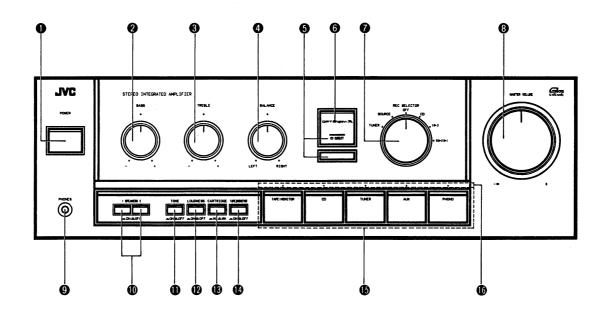
#### RÜCKSEITE

- Plattenspie er-Anschlüsse (PHONO)
- Erdungsanschluß (GND) Hier das Erdungskabel des Plattenspielers anschließen, falls voorhanden.
- CD-Anschlüsse Tuner-Anschlüsse (TUNER)
- AUX-Anschlüsse
- Tonband 1-Aufnahmeanschlüsse (TAPE 1 REC)
- Tonband 1-Wiedergabeanschlüsse (TAPE 1 PLAY)
- Tonband 2-Aufnahmeanschlüsse (TAPE 2 REC)
- Tonband 2-Wiedergabeanschlüsse (TAPE 2 PLAY) Lautsprecher-1-Anschlüsse (SPEAKER 1)
- Lautsprecher 2-Anschlüsse (SPEAKERS 2)
- Netzspannungswähler (LINE + VOLTS ~)'
- Beschaltere Netzausgänge (SWITCHED AC OUTLETS)\*\*
- Unbeschalteter Netzausgang (UNSWITCHED AC OUTLET)\*\*
- Netzkabel.
  - (\*Nicht vorhanden an Geräten für USA, Kanada, Kontinental-Europe Großbritannien und Australien.)

\*Nicht vorhanden an Geräten für Kontinental-Europe, Großbritannien und Australien.)



FRONT PANEL FRONTPLATTE PANNEAU AVANT VOORPANEEL PANEL DELANTERO FRAMPANEL



#### FRONT PANEL

#### POWER

Press this button to turn the power on. To turn the power off, press it again.

#### **Notes**

- When power is not supplied to this amplifier for 2 3 days, the source select button pressed before the power was switched off may be lost when the power is switched on again. If this happens, set the buttons, etc. again.
- An electronic source selector is used in this unit. When the POWER button is first switched on, two or more sources or no source may be selected. Make sure to input the source select data by pressing one of the source selectors.
- If the POWER button is pressed repeatedly to switch on and off too quickly, the same phenomenon as the above will occur.

#### **BASS**

Turn clockwise to boost bass response and counterclockwise to decrease it.

#### **6** TREBLE

Turn clockwise to boost treble response and counterclockwise to decrease it.

#### BALANCE

Balances the volume between the left and right speakers. Usually set it to the center click position.

#### CD DIRECT and indicator

Press this button to enjoy listening to the CD with good sound quality. The indicator lights and the signal fed from the CD terminals is directly connected to the volume, bypassing the circuits on the way, thus allowing you to enjoy listening to an improved sound quality.

#### Note

 While the CD DIRECT button is pressed, the reproduced sound does not change even if the source selector (including TAPE 2 MONITOR) and BALANCE volume are operated, press the CD DIRECT button again to turn the indicator off when using these.

#### 6 □□⊤Super-A indicator

Pressing the POWER button to on, this indicator lights.

#### REC SELECTOR

**TUNER:** Set to this position to record broadcasts while listening to another source.

**SOURCE:** Set to this position to record from sources connected to the PHONO, CD, TUNER or AUX terminals.

**OFF:** Set to this position when you are not recording or dubbing.

**CD:** Set to this position to record CD while listening to another source.

1 ▶ 2: Set to this position to dub from the deck TAPE 1 to TAPE 2.

S ▶ 2 ▶ 1: Set to this position to dub from the deck TAPE 2 to TAPE 1 and record the source selected with the SOURCE SELECTOR onto the deck TAPE 2.

#### **MASTER VOLUME**

Controls the volume of the speakers and headphones.

#### PHONES (Headphones jack)

Plug stereo headphones into this jack for private listening.

If you want to listen to sound from the headphone only, press the SPEAKERS buttons to "OFF".

#### SPEAKERS

Press to switch the speakers connected to the SPEAKERS 1 or 2 terminals on (\_\_\_\_) and off (\_\_\_\_).

#### TONE

ON ( \_\_\_): Press to adjust the tone with the BASS and TREBLE controls.

**DEFEAT (\_\_\_):** Press to this position to obtain a standard (flat) frequency response.

#### LOUDNESS

ON ( \_\_\_): To compensate for the ear's lower sensitivity at low listening levels.

OFF ( \_\_\_): To bypass the LOUDNESS circuit.

#### CARTRIDGE

MC ( \_\_\_ ): Press in when using an MC cartridge having an output of less than 0.5 mV.

MM ( \_\_\_ ): Press again when using an MM or MC cartridge having an output of more than 0.5 mV.

#### TAPE 2 MONITOR

ON ( \_\_\_): Set to this position to listen to the tape deck connected to the TAPE 2 terminals of this unit. If your tape deck is of the 3-head type, you can monitor the recorded sound while recording by setting this button to ON.

OFF ( \_\_\_): Keep this button set to this position, except when you want to listen to the tape deck connected to the TAPE 2 terminals of this unit.

#### Source selector

#### TAPE 1 MONITOR

Press to listen to a tape deck connected to the TAPE 1 terminals.

#### CD

Press to listen to the source connected to the CD terminals.

#### TUNER

Press to listen to radio broadcasts by a tuner connected to the TUNER terminals.

#### AUX

Press to listen to the source connected to the AUX terminals.

#### PHONO

Press to listen to records played by a turntable connected to the PHONO terminals.

#### Source indicator

The indicator corresponding to the source select button pressed lights.

#### **OPERATION**

Before operation, always be sure to set VOLUME at minimum.

When the volume is increased after selecting a source position with no equipment connected to the input terminal, other connected devices (such as speakers) may be adversely affected by external noise and inductive hum.

#### Listening to broadcasts

- 1. Connect a tuner to the TUNER terminals on the rear panel.
- Press the POWER button on.
- 3. Press the TUNER button and make sure that the TAPE 1 MONITOR and TAPE 2 MONITOR buttons are set to off.
- 4. Select the speaker system with the SPEAKERS
- 5. Operate the tuner according to its instruction
- 6. Adjust the VOLUME, LOUDNESS, BALANCE and BASS/TREBLE controls.

#### Listening to records

- 1. Connect a turntable to the PHONO terminals on the rear panel. Press the POWER button on.
- 3. Set the CARTRIDGE button of this unit according to the cartridge in use.
- 4. Press the PHONO button and make sure that the TAPE 1 MONITOR and TAPE 2 MONITOR buttons are set to off
- 5. Select the speaker system with the SPEAKERS switches
- 6. Operate the turntable according to its instruction manual
- 7. Adjust the VOLUME, LOUDNESS, BALANCE and BASS/TREBLE controls.

#### Listening to tapes

- 1. Connect a tape deck to the PLAY terminals of TAPE 1 or TAPE 2.
- Press the POWER button on
- Press the TAPE 1 MONITOR button to play back the TAPE 1 deck. For playback of the TAPE 2 deck, press the TAPE 2 MONITOR
- button to ON ( \_\_\_).

  4. Select the speaker system with the SPEAKERS switches.
- 5. Operate the tape deck for playback according to its instruction manual.
- 6. Adjust the playback sound controls as re-

Do not place the tape deck directly on the amplifier, because it may cause the amplifier to malfunction.

#### Using stereo headphones

Stereo headphones can be plugged into the front panel jack. Plugging headphones into the PHONES jack does not switch off the speaker sound.

#### **Recording tapes**

- Recording from records
- Connect a tape deck to the REC terminals of the TAPE 1 or TAPE 2 terminals.
- Press the POWER button on.
- Select a speaker system if you wish to hear the sound while recording.
- Press the PHONO button.
- Operate the turntable.
- Operate the tape deck for recording.

### - Recording from other sources (TUNER,

CD, AUX) —
Press the TUNER, CD or AUX button to record radio broadcasts, or the source connected to the CD, AUX terminals.

All other operations are identical to when recording from disc source.

- To record from CD, turn the source selector to "CD". It is possible to monitor the high quality sound by pressing the CD DIRECT button. When monitoring other sources while recording, press the CD DIRECT button again to turn the indicator
- Recording from other sources (PHONO, TUNER, AUX) while listening to the CD
- Select the source that you wish to record to from among the PHONO, TUNER and AUX button:
- Operate the tape deck for recording.
- Press the CD DIRECT button.

#### Tape dubbing

Dubbing from the TAPE 1 to TAPE 2 is carried out as follows:

- Press the TAPE 1 MONITOR button.
- Play back the TAPE 1 deck
- Operate the TAPE 2 deck for recording. You can perform tape dubbing while listening to the CD by pressing the CD DIRECT button in addition to the above operations

#### Notes:

- The sound you hear from the speakers or headphones is the source sound, not that being recorded on the tape.
- The VOLUME control of this amplifier has no effect on the recording level. Adjust the recording level with the controls on the tape deck.

#### How to operate the monitor while recording on the tape deck

- Connect a 3-head tape deck to the TAPE 1 or TAPE 2 terminals.
- Make sure to connect the signal cords to the PLAY and REC terminals.
- 3. Select the source from which you want to record by depressing the source select button on this unit.
- 4. Operate the tape deck for recording as described in its operating manual.
- 5. By playing the source component, you can record on the tape deck.
- 6. While recording on the tape deck, the recorded sound can be heard by depressing the TAPE 1 MONITOR or TAPE 2 MONITOR button on this unit.

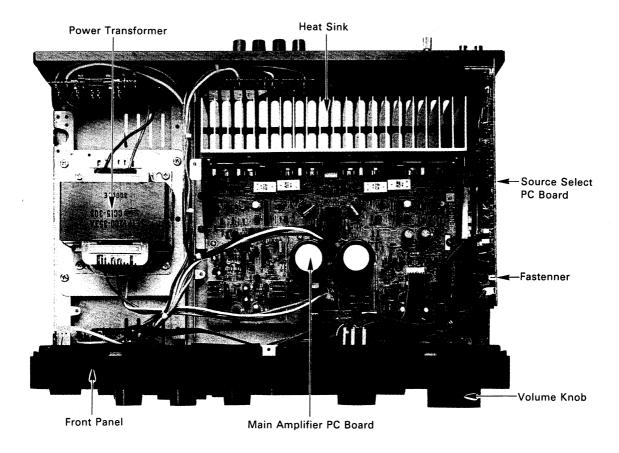
#### Use of S.E.A. Graphic Equalizer

The S.E.A. Graphic Equalizer is JVC's exclusive tone control system. By allowing you to independently boost or lower the response of finely divided sections of the frequency spectrum: the S.E.A. gives you much greater control over the sound quality of your stereo system. With an optionally available S.E.A. Graphic Equalizer, you can tailor the sound to your own taste for different types of music or to compensate for the particular acoustic characteristics of your audio components and listening room.

The TAPE 2 terminals of the AX-511BK or AX-611BK can be used for connecting the S.E.A. Graphic Equalizer.

Even if the S.E.A. Graphic Equalizer is operated while the CD DIRECT button is pressed, reproduced sound is neither adjusted nor compensated. When using the S.E.A. Graphic Equalizer, press the CD DIRECT button once again to turn the indicator off.

### **Removal Procedures**



#### ■ Removing the Top Cover

- 1. Remove six screws.
- 2. Remove the top cover by lifting up its rear section and pulling it backward while holding it on incline.

#### ■ Removing the Front Panel

- 1. Remove the top cover.
- 2. Pull out the volume knob.
- 3. Remove three plastic rivets on the upper part of the front panel and three screws from the lower part.

#### ■ Removing the Bottom Cover

1. Remove 20 screws fixing the bottome cover.

## ■ Removing the Source Select PC Board

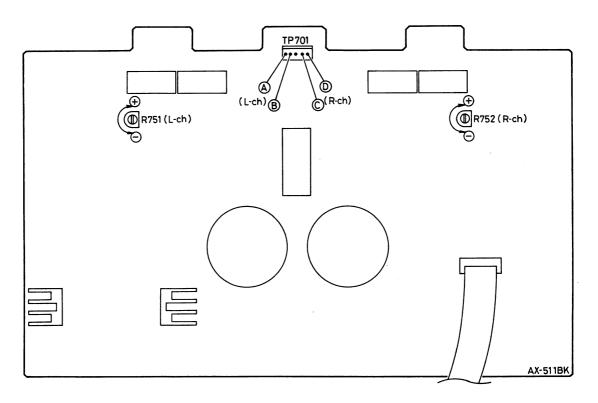
- 1. Remove the top cover.
- 2. Remove four screws fixing the pin jacks.
- 3. Remove the fastenner from the source select pc board. (See above figure.)
- 4. Pulling the source select pc board toward you.

#### ■ Removing the Power Transistors

- 1. Remove the top cover.
- 2. Remove the bottom cover.
- 3. Remove the retaining screw from the defective power transistor and replace it.

### **Adjustment Procedures**

#### ■ Power Amplifier Idling Adjustment



- Before turning on the power, turn the semi-fixed resistors (R751 for L channel and R752 for R channel of the power amplifier circuit board fully counterclockwise.
- Adjust the semi-fixed resistor (R751 and R752) so that the voltage at the following test points of the power amplifier circuit board is within a range of 1 ~ 3 mV after the power is turned on.

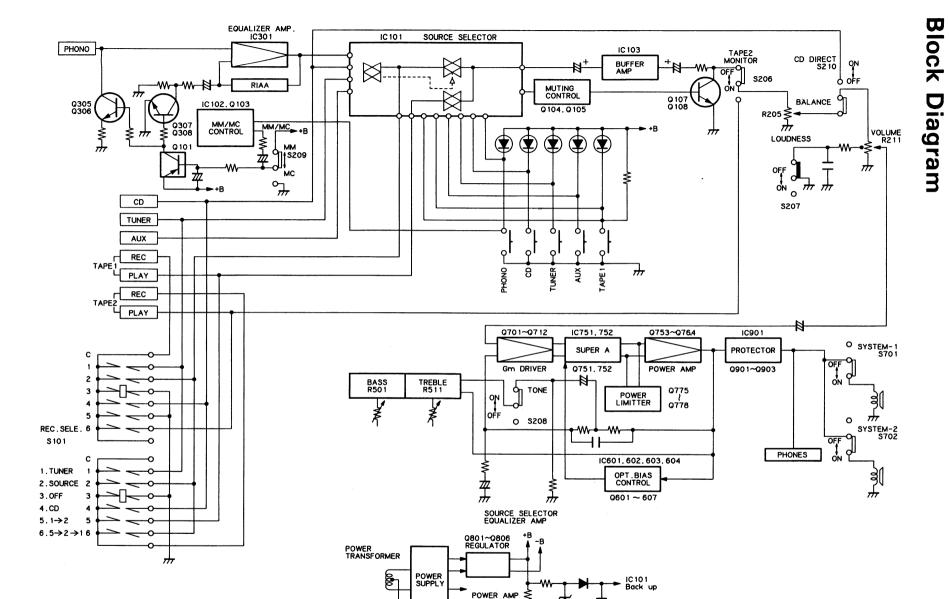
L channel: Measure the voltage between test point
(A) (emitter of Q901) and output at the test point (B).

R channel: Measure the voltage between test point (a) (emitter of Q902) and output at the test point (b).  Readjust resistors R751 and R752 about 10 minutes after the power is turned on (the heatsink temperature must be sufficiently high) so that the voltage at the test points becomes 11 mV.

Confirm that the voltage does not vary when the heatsink temperature increases further.

Note: Be sure to perform the measurement with the probes and cabinet of the measuring equipment separated from the grounding terminals of AX-511BK or other measuring equipment.

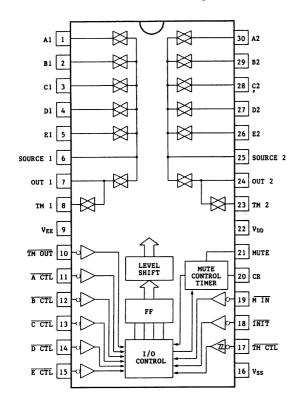
Since this set is a parallel balanced (push-pull) amplifier, check idling current of all the transistors after the above adjustment is performed.



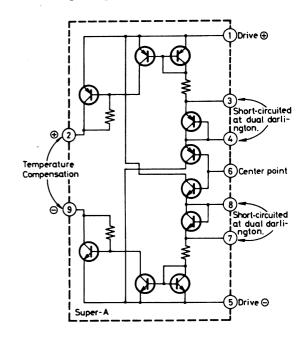
OPT.SUPER A

### **Internal Block Diagrams of ICs**

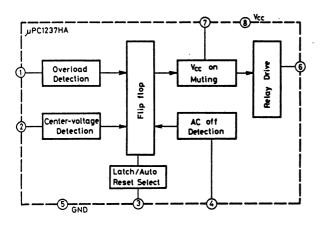
■ LC7818 (IC101): Analog Switch



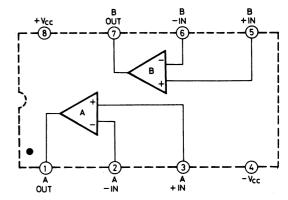
■ VC5022 [X, Y] (IC751, IC752): Super-A



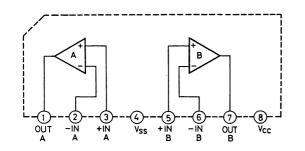
 $\blacksquare$   $\mu$ PC1237HA (IC901): Relay Driver



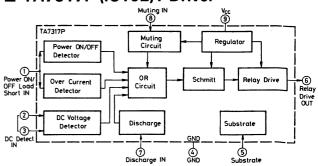
■ NJM4560DD (IC301): Dual OP Amp.



■ VC4580LD (IC103) : Dual OP Amp. ■ BA15218N (IC601, 602) : Dual OP Amp.



■ TA7317P (IC102): Driver

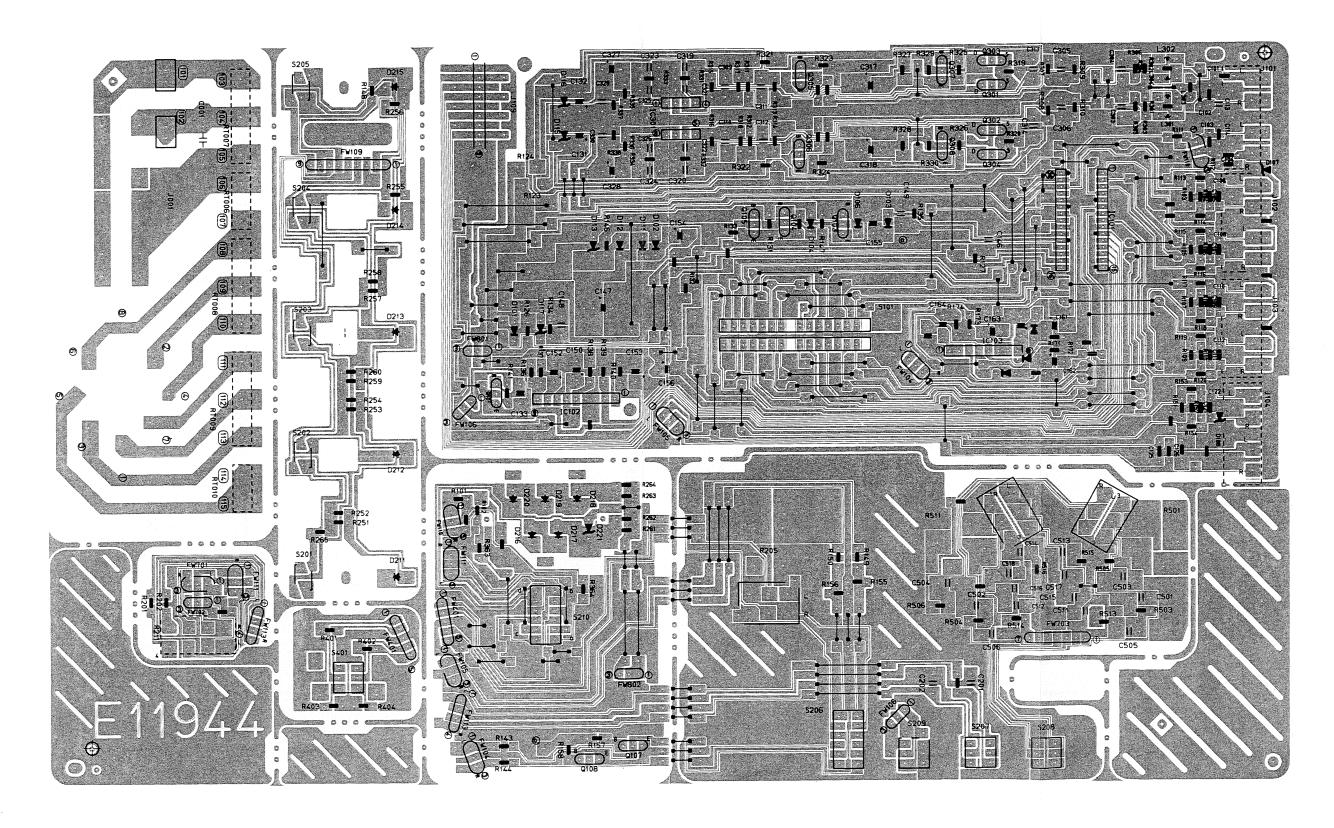


**Connection Diagram** 

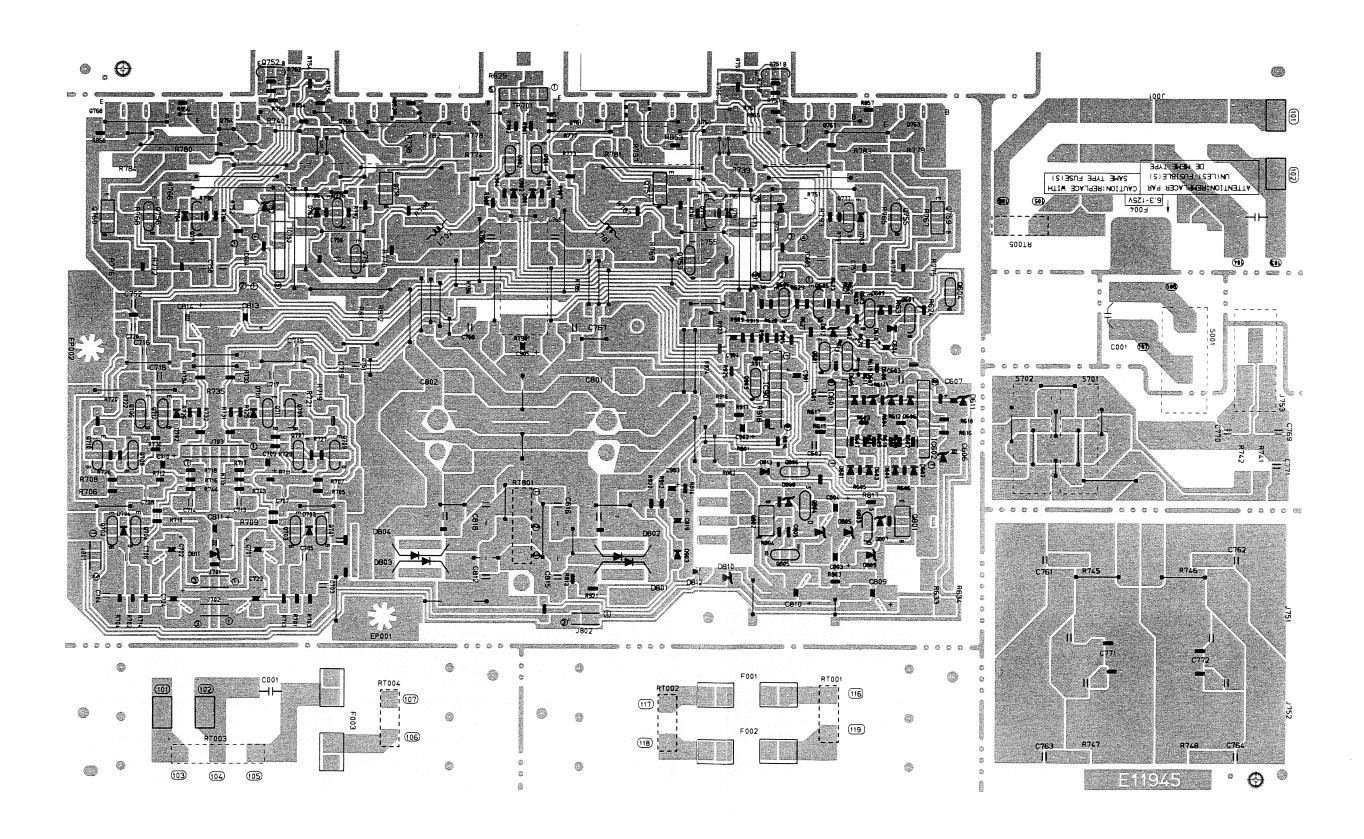
#### Voltage Selector PC Board Speaker Terminal PC Board ENE-057-6 **Power Cord** FWIIO 3/11/O (in) I (104) (06) (108) (110) (112) (114) (103) (105) (107) (109) (111) (113) (115) (117) (117) (117) (117) ENH-128-2 Source Selector PC Board 3 FW104 ENE-057-I 117 (116) Main Amplifier PC Board (119) ENH-128-1 Fuse PC Board ENH-128-5 **Power Transformer** RT80I ① CD Direct Indicator PC Board Front Control **PC Board** ENE-057-3 ENE-057-4 0 FWI06 Volume PC Board **Power Switch** (S001) ENE - 057-5 ENE-057-2 ENH-128-3 Speaker Selector PC Board Source Indicator PC Board

### **Printed Circuit Boards**

■ Source Select PC Board (ENE-057)

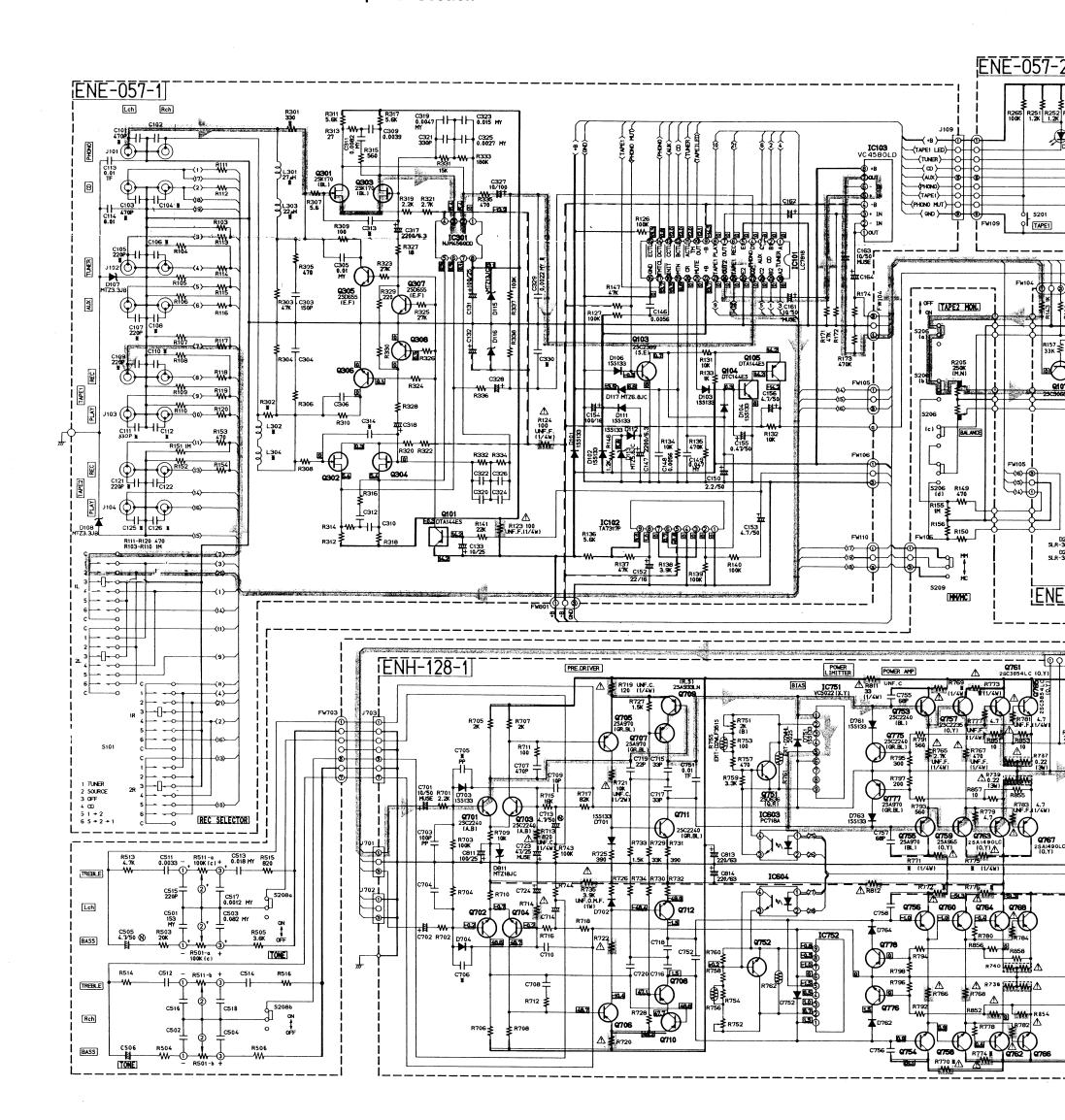


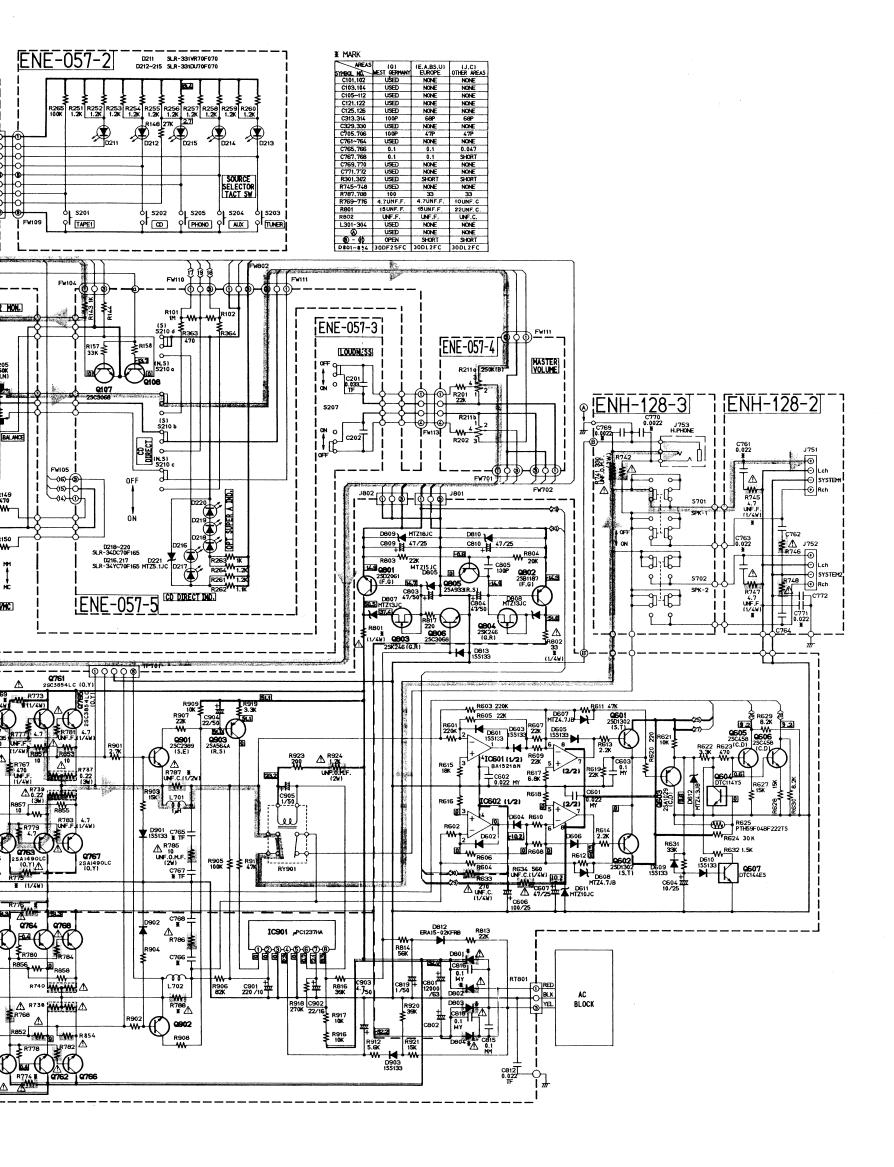
### ■ Main Amplifier PC Board (ENH-128)



### **Schematic Diagrams**

■ Source Select and Main Amplifier Section

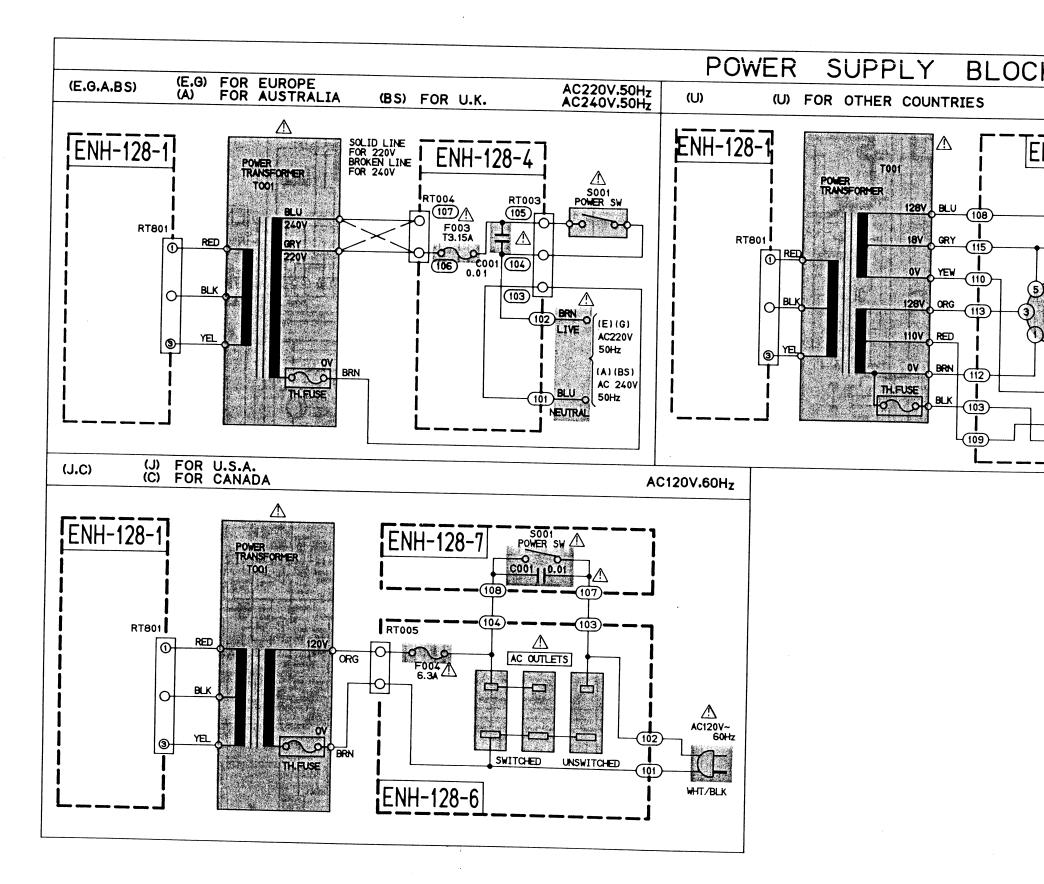


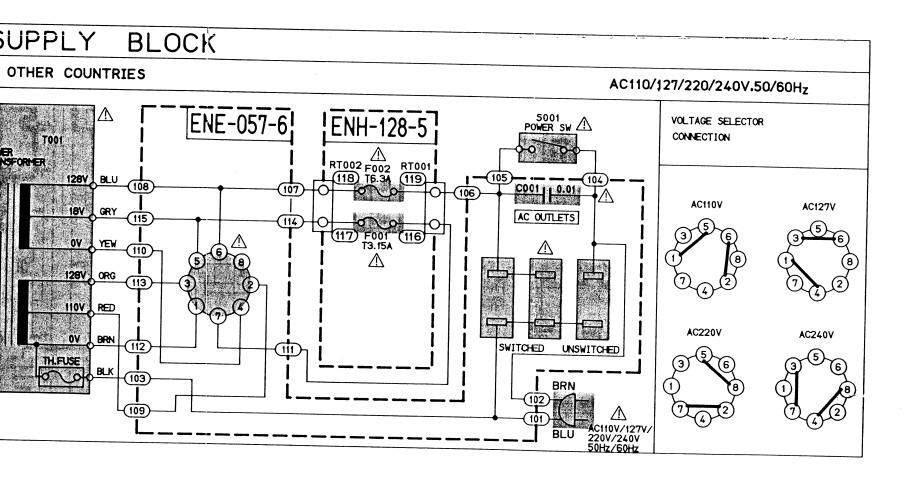


### ■ Power Supply Section

#### Notes:

- indicates + B power supply.
- 2. ——— indicates B power supply.
- 3. indicates signal path.
  4. shows DC voltage to the chassis with no signal input.
- 5. When replacing the parts in the darkened are ( and those marked with  $\triangle$  , be sure to use the designated parts to ensure safety.
- 6. This is the standard circuit diagram. The design and contents are subject to change without notice.



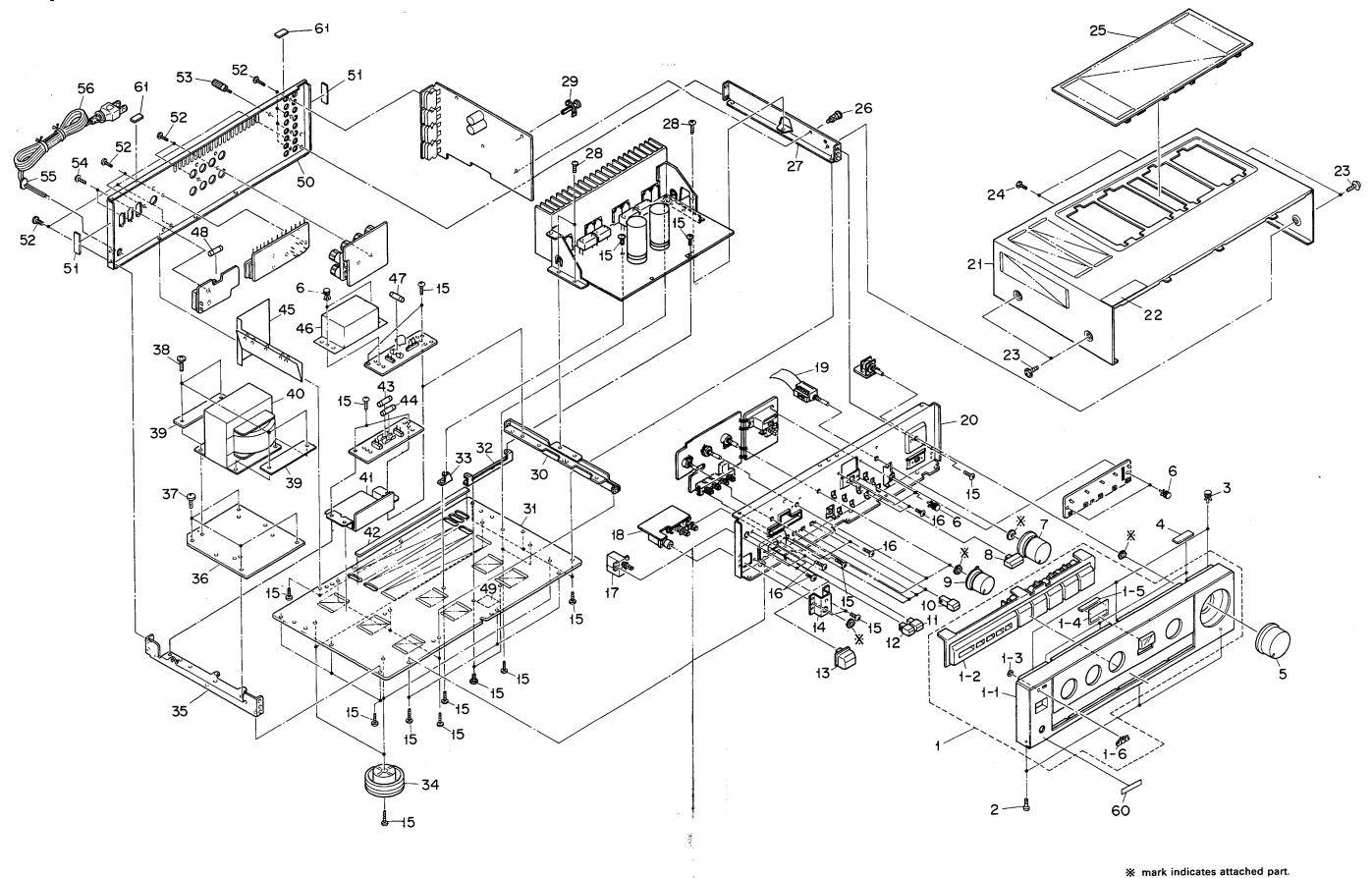


# **PARTS LIST**

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Exploded View and Parts List	3
Printed Circuit Board Ass'y and Parts List	
■ ENH-128 □ Main Amplifier PC Board Ass'y2-7	
■ ENE-057 □ Source Selector PC Board Ass'y	
Accessories List	
Packing Materials and Part Numbers 2-	

## **Exploded View and Parts List**



$\triangle$	ltem	Part Number	Part Name	Q'ty	Description	Areas
	1 1-1 1-2 1-3 1-4	EFP-AX511BKE E26392-001 E26332-003 E60912-003 E75327-001	Front Panel Ass'y Front Panel Push Button Ass'y Speed Nut Indicator Sheet	1 1 1	-	
	1-5 1-6 2 3 4	EXO032003N10S02 E72968-001 SBSG3006M E48729-009 EXO060007N40S	Spacer JVC Mark Screw Plastic Rivet Felt Spacer	1 1 3 3		
	5 6 7 8	E305980-001 E48729-008 E48729-008 E305982-001 E75117-001	Volume Knob Plastic Rivet Plastic Rivet Knob Push Button	1 4 6 1 1		J,C Except J,C
	9 10 11 12 13	E305981-001 E75182-001 E75073-002 E75073-001 E75079-001	Knob Push Button Push Button Push Button Power Button	3 4 1 1 1		
	14 15 16 17	E75186-001 SBSG3008CC SBSG3008CC SBST3006CC E71005-001	Headphone Bracket Screw Screw Screw Switch Cover	1 30 34 8 1		J,C Except J.C Except J,C
	18 19 20 21	QSP1106-005 QSP1106-005BS QSR2B16-E02 E11954-001 E26269-001	Push Switch Push Switch Flex Rotaly Front Bracket Metal Cover	1 1 1 1	S001 S001	Except J,C,BS BS J,C,G,A
	22 23 24 25	E26269-002 E67000-005 E61660-004 SBSG3008M E24134-008	Metal Cover Caution Label Special Screw Screw Grill	1 1 4 2 1		E,EF,U,BS
	26 27 28 29 30	E303216-001 E305801-001 GBSB3008CC E69384-002 E305802-001	Fastener Side Bracket Screw Fastener Center Bracket	1 1 3 1 1	Right	
	31 32 33 34 35	E26268-002 E75341-001 E68587-008 E75088-001 E305800-001	Bottom Cover Circuit Board Bracket Bracket Foot Ass'y Side Bracket	1 1 1 4 1	Left	
	36 37 38 39	E305803-003 E65389-004 E65389-004 E65389-006 E75419-001	Trans Bracket Special Screw Special Screw Special Screw Plate	1 4 4 4 2		J,C J,C Except J,C Except J,C
	<b>40</b> 41	ETP1200-35JA ETP1200-35FA ETP1200-35EA ETP1200-35EABS E75439-001	Power Transformer Power Transformer Power Transformer Power Transformer Protect Cover	1 1 1 1	T001 T001 T001 T001	J,C U E,EF,A,G BS Except J,C
<b>A</b>	42 43 44 45	EXO255005N60S02 QMF51A2-3R15S QMF51A2-6R3S E305986-002 E306241-001	Spacer Fuse Fuse Protect Cover Protect Cover	1 1 1 1	F001 F002	U U Except U U
<b>A</b>	46 47 48 49	E306171-001 QMF51A2-3R15S QMF51E2-3R15SBS QMF61U1-6R3 E70281-001	Protect Cover Fuse Fuse Fuse Caution Label	1 1 1 1	F003 F003 F004	Except J,C E,EF,A,G BS J,C J

**△** Safety Parts

2-6 (No. 20105)

Δ	Item	Part Number	Part Name	Q'ty	Description	Areas
	50 —	E70115-002 E26340-001 E26340-002 E26340-003 E303260-191	Caution Label Rear Panel Rear Panel Rear Panel Rating Label	1 1 1 1		BS J,C U Except J,C,U E,EF,G
⚠	51 52 53 54 55	EXO040010R10S10 E73273-001 E70078-001 SDSB3008M QHS3876-162	Spacer Special Screw GND Terminal Screw Cord Stopper	2 13 1 2 1		J,C,U Except BS
	56	QHS3876-162BS QMP1480-200 QMP7520-200 QMP3900-200 QMP2560-244	Cord Stopper Power Cord Power Cord Power Cord Power Cord	1 1 1 1		BS J,C U E,EF,G A
$\triangle$	57 58 59 60 61	QMP9017-008BS E69589-010 E67199-001 E65507-001 E49267-001 EXO050010N20S	Power Cord Spacer Caution Label Caution Label Origin Marking Label Felt Spacer	1 1 2 1 1 1 2		BS J J C BS

**⚠** Safety Parts

#### The Marks for Designated Areas

J-----the U.S.A. G------West Germany C·····Canada BS-----the U.K. U-----Other Countries

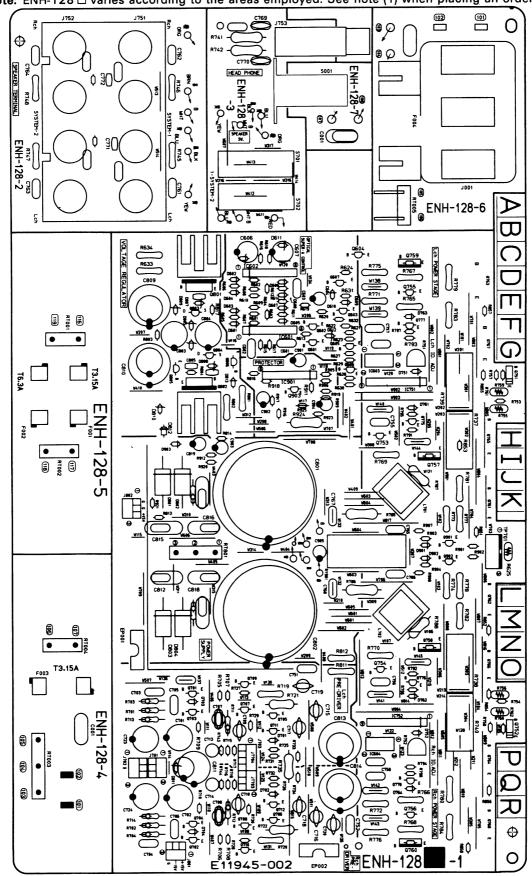
E,EF-----Continental Europe

No mark indicates all areas. A-----Australia

### Printed Circuit Board Ass'y and Parts List

### ■ ENH-128 ☐ Main Amplifier PC Board Ass'y

Note: ENH-128 ☐ varies according to the areas employed. See note (1) when placing an order.



### Note (1)

PC Board Ass'y	Designated Areas
ENH-128 A	Other Countries
ENH-128 B	Australia, Continental Europe
ENH-128 C	West Germany
ENH-128 D BS	the U.K.
ENH-128 E	the U.S.A., Canada

Tra	ansis	tors			
$\Lambda$	тем	PART NUMBER	DESCR	IPTION	AREA
-					
<u></u>				MAKER	
1	9601	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q602		SILICON	MATSUSHITA	
1	0603	2SA1029(C,D)	SILICON	HITACHI	
	Q604	DTC114YS	SILICON	ROHM	
l	0605	2SC458(C.D)	SILICON	HITACHI	
	0606	2SC458(C,D)	SILICON	HITACHI	
1	Q607	DTC144ES	SILICON	ROHM	
l	Q701	2SC2240(A,B)	SILICON	TOSHIBA	
1	Q702	2SC2240(A,B)	SILICON	TOSHIBA	ĺ
	Q703	2SC2240(A,B)	SILICON	TOSHIBA	
	Q704	2SC2240(A,B)	SILICON	TOSHIBA	
	Q705		SILICON	TOSHIBA	
	Q707	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q708		SILICON SILICON	TOSHIBA	
	0709	2SA933LN(R,S)	SILICON	TOSHIBA ROHM	
	Q710		SILICON	ROHM	
	Q711		SILICON	TOSHIBA	
	Q712		SILICON	TOSHIBA	
1	Q751		SILICON	MATSUSHITA	
	Q752		SILICON	MATSUSHITA	
	Q753	2SC2240(BL)	SILICON	TOSHIBA	
İ	Q754	2SC2240(BL)	SILICON	TOSHIBA	
	Q755	2SA970(BL)	SILICON	TOSHIBA	
ļ	Q756	2SA970(BL)	SILICON	TOSHIBA	
	Q757	2SC2235(0,Y)	SILICON	TOSHIBA	
	Q758		SILICON	TOSHIBA	
	Q759		SILICON	TOSHIBA	
	Q760		SILICON	TOSHIBA	
	Q761		SILICON	SANKENI	
	Q762	2SC3854LC(0, P, Y)	SILICON	SANKEN!	
	Q763 Q764		SILICON	SANKEN SANKEN	
	Q765		SILICON SILICON	SANKEN	
	Q766		SILICON	SANKEN.	
	Q767	2SA1490LC(0, P, Y)	SILICON	SANKEN	
	Q768		SILICON	SANKEN	
	Q775	2SC2240(GR,BL)	SILICON	TOSHIBA	
Ì	9776		SILICON	TOSHIBA	
	Q777	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q778	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q801	2SD2O61(F,G)	SILICON	ROHM	
	Q802	2SB1187(F,G)	SILICON	ROHM	
	Q803	2SK246(GR)	F.E.T	TOSHIBA.	
ļ	Q804	2SK246(GR)	F.E.T	TOSHIBA	
	Q805	2SA933S(R,S)	SILICON	ROHM	
	Q806		SILICON	SANYO	
	Q901		SILICON	ROHM	
1	0902		SILICON	ROHM	
لــــا	Q903	2SA564A(R,S)	SILICON	MATSUSHITA	

▲: SAFETY PARTS

#### I.C.s

1.0	5	·			
⚠	ITEM	PART NUMBER	DESCR	IPTION	A R E A
				MAKER	
	10601	BA15218N	ı.c.	MITSUBISHI	
	I C 6 0 2	BA15218N	I.C.	MITSUBISHI	
	IC603	PC817A	I.C.	SHARP	
	I C 604	PC817A	I.C.	SHARP	
	IC751	VC5022(X,Y)	ı.c.	ROHM	
	IC752	VC5022(X,Y)	I.C.	ROHM	
	10901	UPC1237HA	1.C.	RYOSAN	
			Δ:	SAFETY PAR	TS
			)		

#### **Diodes**

	Jues				
Δ	LTEM	PART NUMBER	DESCR	IPTION	AREA
				MAKER	
İ	D601	188133	SILICON	ROHM	
	0602		SILICON	ROHM	1
İ	0603		SILICON	ROHM	1
	D604		SILICON	ROHM	l
1	D605	188133	SILICON	ROHM	l
1	D606		SILICON	ROHM	
1	D607	MTZ4.7JB	ZENER	ROHM	
	D608		ZENER	ROHM	
İ	0609	188133	SILICON	ROHM	i
	D610		SILICON	ROHM	
	D611	MTZ10JC	ZENER	ROHM	
	D612	MTZ4.3JB	ZENER	ROHM	
1	D701	188133	SILICON	ROHM	İ
1	0702	188133	SILICON	ROHM	
1	0703	188133	SILICON	ROHM	
	D704	188133	SILICON	ROHM	
1	D751	188133	SILICON	ROHM	
1	D752	188133	SILICON	ROHM	1
	D761	188133	SILICON	ROHM	
	D762	188133	SILICON	ROHM	
	D763	188133	SILICON	ROHM	
	D764	188133	SILICON	ROHM	
	D801	30DF2SFC	SILICON	NIHONINTER	c
	D801	30DL2FC	SILICON	NIHONINTER	Ā
	D801	30DL2FC	SILICON	NIHONINTER	В
	D801	30DL2FC	SILICON	NIHONINTER	DBS
	D801	30DL2FC	SILICON	NIHONINTER	Ε
	0802	30DF2SFC	SILICON	NIHONINTER	c
	0802	30DL2FC	SILICON	NIHONINTER	Α
l	D802	30DL2FC	SILICON	NIHONINTER	В
	D802	30DL2FC	SILICON	NIHONINTER	DBS
	D802	30DL2FC	SILICON	NIHONINTER	Ε
1	0803	30DF2SFC	SILICON	NIHONINTER	С
	D803	30DL2FC	SILICON	NIHONINTER	Α
ll	D803	30DL2FC	SILICON	NIHONINTER	В
	D803	30DL2FC	SILICON	NIHONINTER	DBS
	D803	30DL2FC	SILICON	NIHONINTER	E
	D804	30DF2SFC		NIHONINTER	С
	D804	30DL2FC	SILICON	NIHONINTER	Α
	D804	30DL2FC	SILICON	NIHONINTER	В
	D804	30DL2FC		NIHONINTER	DBS
	D804			NIHONINTER	Ε
	D805	MTZ15JC		ROHM	
1 1	D807			ROHM	
	D808		ZENER	ROHM	
	D809		ZENER	ROHM	
	D810			ROHM	
	D811			ROHM	
	D812			KYOUDOU	
Jl	D813	188133		ROHM ·	
	D901	188133		ROHM	
	D902			ROHM	
	D903	188133	SILICON	ROHM	
Ш					

A : SAFETY PARTS

#### Capacitors

	LTEM	PART	NUM	BER	D	E	S (	C R	1	l, .	r 1	О	N	ΛRΕΛ
	C001	QCZ903			0.0	1 M	F			CE	RAP	110		В
1	C001	QCZ903	8-103		0.0	1 M	F	1		CEF	RAN	1 I C		C
	C001	QCZ903			0.0	1 M	F		- 1	CEF	RAN	1 I C		E
	C001	QCZ903	8-103	BS	0.0	1 M	F		1	CEF	RAN	1 I C		DBS
	C601	QFN81H			0.0	22	ΜF	50V	ļ	MΥL	. A F	₹		
	C602		J-223		0.0	22	MF	50V	- )	MΥĮ	AF	} ``		
	C603	QFN81H	K-104		0.1	ΜF		50V	l	MYL	AF	}		
	C604	QETB1E	M-106		10M	F		25 V		ELE	E C 1	RO		
	C606	QETB1E	M-107		100	ΜF		25 V		ELE	C 1	RO		
1.	C607	QETB1E	M-476		47M	F		25 V	- 1	ELE	E C 1	RO		
1	C701	EEZ500	9-106		10M	F		1		ELE	C 1	RO		
	C702	EEZ500	9-106		10M	F			- i	ELE	C T	RO		
	C703	QFP81H			100	PΕ		50V	- 1	POL	Υ.			
	C704	QFP81H			100	ΡF		50V		POL	Υ			
l		QFP81H			100	ΡF		50V	1	POL	Υ.			С
		QFP81H	J-470		47P	F		50V	····/s	POL	Υ.			Α
		QFP81H			47P	F		50V	F	0 L	Υ.			В
	C705	QFP81H	J-470		47P	F		50V	F	20L	Υ.			DBS
	C705	QFP81H			47P	F		50V	F	90L	Υ.			Ε
l	C706	QFP81H			100	PF		50V	F	20L	Υ.			С
1	C706	QFP81H	J-470	1	47P	F		50V	F	OL	Y			A
	- 1	QFP81H			47P			50V	F	POL	Υ.			В
	C706	QFP81H	-		47P			50V	F	OL	Υ.			DBS
	C706	QFP81H			47P			50V	F	OL	Υ.			E
L	C707	QCS21H	J-471		4701	PF		50V		ER	AM	I C		

A: SAFETY PARTS

#### Capacitors

<u>∟a</u>	pacit	ors	,			
4	!	PART NUMBER	DESC		PTION	ΛΚΕΛ
1	C708	QCS21HJ-471	470PF	50V	CERAMIC	
1	C709	QCS21HJ-100	10PF	50V 50V	CERAMIC	
1	C710	QCS21HJ-100	10PF	50V 50V	CERAMIC NON POLE	
	C713	QEN51HM-475	4.7MF 4.7MF	50V	NON POLE	
	C714	QEN51HM-475	33PF	50V	CERAMIC	
	C716	QCS21HJ-330 QCS21HJ-330	33PF	50V	CERAMIC	
	C717	QCS21HJ-330	33PF	50V	CERAMIC	
İ	C718	QCS21HJ-330	33PF	50V	CERAMIC	
	C719	QCS21HJ-220	22PF	50V	CERAMIC	
	C720	QCS21HJ-220	22PF	50V	CERAMIC	
	C723	EEZ2505-476	47MF		ELECTRO	
	C724	EEZ2505-476	47MF		ELECTRO	}
1	C751	QFV81HJ-103	0.01MF	50V	T.FILM	
1	C752	QFV81HJ-103	0.01MF	50V	T.FILM	l
	C755	QCS32HJ-680	68PF	500V	CERAMIC	
	C756	QCS32HJ-680	68PF	500V	CERAMIC	
	C757	QC\$32HJ-680	68PF	500V	CERAMIC	
	C758	QCS32HJ-680	68PF	500V	CERAMIC	_
ļ	C761	QFN81HK-223	0.022MF	50V	MYLAR	C
	C762	QFN81HK-223	0.022MF	50V 50V	MYLAR	C
1	C763	QFN81HK-223	0.022MF	50V	MYLAR MYLAR	c
	C764	QFN81HK-223 QFV81HJ-104	0.022MF	50V	T.FILM	Ä
1	C765	QFV81HJ-104	0.1MF	50V	T.FILM	В
	C765	QFV81HJ-104	0.1MF	50V	T.FILM	c
1	C765	QFV81HJ-104	0.1MF	50V	T.FILM	DBS
	C765	QFV81HJ-473	0.047MF	5 O V	T.FILM	Ε
	C766	QFV81HJ-104	0.1MF	50V	T.FILM	Α
1	C766	QFV81HJ-104	0.1MF	50V	T.FILM	В
	C766	QFV81HJ-104	0.1MF	50V	T.FILM	С
1	C766	QFV81HJ-104	0.1MF	50V	T.FILM	DBS
	C766	QFV81HJ-473	0.047MF	50V	T.FILM	Ε
1	C767	QFV81HJ-104	0.1MF	50V	T.FILM	A
	C767	QFV81HJ-104	0.1MF	50V	T.FILM	B 
	C767	QFV81HJ-104	0.1MF 0.1MF	50V 50V	T.FILM T.FILM	DBS
	C767	QFV81HJ-104 QFV81HJ-104	0.1MF	50V	T.FILM	A
	C768	QFV81HJ-104	0.1MF	50V	T.FILM	В
	C768	QFV81HJ-104	0.1MF	50V	T.FILM	C
1	C768	QFV81HJ-104	0.1MF	50V	T.FILM	DBS
	C769		2200PF	50V	CERAMIC	С
	C770	QCF21HP-222	2200PF	50V	CERAMIC	С
1	C771	QCHB1EZ-223	0.022MF	25 V	CERAMIC	C
l	C772	QCHB1EZ-223	0.022MF	25V	CERAMIC	С
	C801	EEW6309-129T	12000MF		ELECTRO	
	C802	EEW6309-129T	12000MF	50V	ELECTRO	
	C803	QETB1HM-476 QETB1HM-476	47MF 47MF	500	ELECTRO	ŀ
1	C804	QCBB1HK-101	100PF	50V	CERAMIC	l
	C809	QETB1EM-107	100MF	25V	ELECTRO	
	C810	QETB1EM-107	100MF	25V	ELECTRO	
	C811	QETB1EM-107	100MF	25V	ELECTRO	
	C812	QFV81HJ-223	0.022MF	50V	T.FILM	1
1	C813	QETB1JM-227	220MF	63V	ELECTRO	
1	C814	QETB1JM-227	220MF	63V	ELECTRO	
	C815	QFH42EK-104	O.1MF	250V	M.MYLAR	1
	C816		O.1MF	100V	MYLAR	
	C818		0.1MF	100V	MYLAR	
	C819		1MF	500	ELECTRO	
	C901	QETB1AM-227	220MF 22MF	10V 16V	ELECTRO	
1	C902	QETB1CM-226 QETB1HM-475	4.7MF	50V	ELECTRO	
	C904		22MF	50V	ELECTRO	
	C905		1MF	50V	ELECTRO	

#### A: SAFETY PARTS

#### Resistors

Δ	LTEM	PART NUMBER	DESC	RI	PTION	AREA
	R601	QRD167J-224	220K	1/6W	CARBON	
	R602	QRD167J-224	220K	1/6W	CARBON	1
	R603	QRD167J-224	220K	1/6W	CARBON	
	R604	QRD167J-224	220K	1/6W	CARBON	l
	R605	QRD167J-223	22K	1/6W	CARBON	1
	R606	QRD167J-223	22K	1/6W	CARBON	
1	R607	QRD167J-223	22K	1/6W	CARBON	
	R608	QRD167J-223	22K	1/6W	CARBON	
	R609	QRD167J-223	22K	1/6W	CARBON	
ĺ	R610	QRD167J-223	22K	1/6W	CARBON	
	R611	QRD167J-473	47K	1/6W	CARBON	
	R612	QRD167J-473	47K	1/6W	CARBON	
	R613	QRD167J-222	2.2K	1/6W	CARBON	
1	R614	QRD167J-222	2.2K		CARBON	
1	R615	QRD167J-183	18K		CARBON	
1	R616	QRD167J-183	18K		CARBON	
	R617	QRD167J-682	6.8K	1/6W	CARBON	<u> </u>

Re	sisto	rs				
Â	LTEM	PART NUMBER	DESC	R I	PTION	AREA
	R618 R619	QRD167J-682 QRD167J-223	6.8K 22K	1/6W 1/6W	CARBON CARBON	
	R620	QRD167J-221	220	1/6W	CARBON	
	R621 R622	QRD167J-103 QRD167J-332	10K 3.3K	1/6W 1/6W	CARBON CARBON	
	R623	QRD167J-471	470	1/6W	CARBON	
	R624 R625	QRD167J-303 PTH59F04BF222TS	30K	1/6W	CARBON POSISTOR	
	R627	QRD167J-153	15K	1/6W	CARBON	
	R628 R629	QRD167J-153 QRD167J-822	15K 8.2K	1/6W 1/6W	CARBON CARBON	
	R630	QRD167J-822	8.2K	1/6W 1/6W	CARBON CARBON	
	R631 R632	QRD167J-333 QRD167J-152	33K 1.5K	1/6W	CARBON	
Δ	R633 R634	QRD14CJ-271S QRD14CJ-561S	270 560	1/4W 1/4W	UNF.CARBON	
Δ	R701	QRD167J-222	2.2K	1/6W	CARBON	
	R702 R703	QRD167J-222 QRD167J-104	2.2K 100K	1/6W 1/6W	CARBON	
	R704	QRD167J-104	100K	1/6W	CARBON	
	R705 R706	QRD167J-202 QRD167J-202	2 K 2 K	1/6W 1/6W	CARBON CARBON	
	R707	QRD167J-202	2 K	1/6W	CARBON	
	R708 R709	QRD167J-202 QRD167J-103	2K 10K	1/6W 1/6W	CARBON CARBON	
	R710	QRD167J-103	10K	1/6W	CARBON	
	R711 R712	QRD167J-101 QRD167J-101	100	1/6W 1/6W	CARBON	
Δ	R713	QRD14CJ-821S	820	1/4W	UNF.CARBON	
Δ	R714 R715	QRD14CJ-821S QRD167J-163	820 16K	1/4W 1/6W	UNF.CARBON	
	R716	QRD167J-163	16K	1/6W	CARBON	
	R717	QRD167J-823 QRD167J-823	82K 82K	1/6W 1/6W	CARBON	
Δ	R 7:19	QRD14CJ-121S	120	1/4W	UNF. CARBON	
A	R720	QRD14CJ-121S QRD125J-103	120 10K	1/4W 1/2W	UNF.CARBON	
Δ	R722	QRD125J-103	10K	1/2W	UNF.CARBON	ļ
	R725	QRD167J-391 QRD167J-391	390 390	1/6W	CARBON	
	R727	QRD167J-152	1.5K	1/6W	CARBON	
	R728	QRD167J-152 QRD167J-333	1.5K 33K	1/6W	CARBON	
	R730	QRD167J-333	33K	1/6W	CARBON	
	R731	QRD167J-391 QRD167J-391	390 390	1/6W 1/6W	CARBON CARBON	
	R733		1.5K	1/6W	CARBON	
Δ	R734	QRG012J-392A	1.5K 3.9K	1/6W 1W	O.M.FILM	
立	R736		0.22	3W 3W	CEMENT	
Δ	R738	ERF032K-R22	0.22	3 W	CEMENT	
	R739		330	3 W 2 W	CEMENT O.M.FILM	
	R742		330	2 W	O.M.FILM	
	R743		100K 100K	1/6W 1/6W	CARBON CARBON	
Δ.	R745	QRD14CJ-4R7S	4.7	1/4W	UNF. CARBON	
Δ Δ	R746		4.7	1/4W 1/4W	UNF.CARBON	
Δ	R748	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	
	R751		2 K 2 K		VARIABLE VARIABLE	
	R753	QRD167J-101	100	1/6W	CARBON	
	R754		100 350	1/6W 1/4W	CARBON THERMISTOR	
	R756	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R757		470 470	1/6W 1/6W	CARBON	
	R759	QRD167J-332	3.3K	1/6W	CARBON	
	R760	l e	3.3K 2K	1/6W 1/4W	CARBON THERMISTOR	
	R762	ERT-D2WHL202S	2 K	1/4W	THERMISTOR	
<u>∧</u>	R765		2.7K 2.7K	1/4W 1/4W	FUSIBLE FUSIBLE	
\\\\\\\\	R767	QRZ0077-471	470 470	1/4W 1/4W	FUSIBLE FUSIBLE	
Δ Δ	R768	QRD14CJ-100S	10	1/4W 1/4W	UNF.CARBON	
<b>∆</b>	R769	QRZ0077-4R7	4.7	1/4W 1/4W	FUSIBLE FUSIBLE	A B
Δ	R769	QRZ0077-4R7	4.7	1/4W	FUSIBLE	С
Δ.	R769		4.7	1/4W 1/4W	FUSIBLE UNF.CARBON	DBS E
Δ.	R770	QRZ0077-4R7	4.7	1/4W	FUSIBLE	Α
<u>↑</u>	R770		4.7	1/4W 1/4W	FUSIBLE FUSIBLE	B
₾	R770	QRZ0077-4R7	4.7	1/4W	FUSIBLE	DBS
Δ	R771	QRD14CJ-100S	10	1/4₩ Δ : S	AFETY PA	RTS
			•	ച . ട	WIDIL LV	W 1 9

#### Resistors

Re	sisto	rs				
Δ	LTEM	PART NUMBER	DESC	C R I	P T 1 O N	AREA
4	R771 R771	QRZ0077-4R7	4.7	1/4W		A
Δ.	R771	QRZ0077-4R7 QRZ0077-4R7	4.7	1/4W	FUSIBLE FUSIBLE	B
Δ	R771	QRZ0077-4R7	4.7	1/4W	FUSIBLE	DBS
<u>.</u>	R772	QRD14CJ-100S	10	1/4W	· 4.· · · · · · · · · · · · · · · · · ·	
企	R772		4.7	1/4W 1/4W	FUSIBLE FUSIBLE	В
د ک	R772	QRZ0077-4R7	4.7	1/4W	1	Č
Δ Δ	R772		4.7	1/4W	ľ	DBS
Δ	R773		10	1/4W		E A
Δ	R773	QRZ0077-4R7	4.7	1/4W	FUSIBLE	В
<u>∧</u>	R773		4.7	1/4W	FUSIBLE FUSIBLE	DBS
$\triangle$	R774	QRD14CJ-100S	10	1/4W		
Δ	R774	QRZ0077-4R7	4.7	1/4W	FUSIBLE	Α
Δ	R774	QRZ0077-4R7 QRZ0077-4R7	4.7	1/4W		B C
$\overline{\mathbb{A}}$	R774	QRZ0077-4R7	4.7	1/4W		DBS
Δ.	R775	QRD14CJ-100S	10	1/4W		
⚠	R775	QRZ0077-4R7 QRZ0077-4R7	4.7	1/4W	FUSIBLE FUSIBLE	B
Δ	R775	QRZ0077-4R7	4.7	1/4W	FUSIBLE	c
Δ	R775	QRZ0077-4R7	4.7	1/4W	FUSIBLE	DBS
. <u>♠</u>	R776	QRD14CJ-100S QRZ0077-4R7	10 4.7	1/4W		Ε
Δ	R776	QRZ0077-4R7	4.7	1/4W	FUSIBLE	В
⚠	R776	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
<b>⚠</b>	R776 R777	QRZ0077-4R7 QRZ0077-4R7	4.7 4.7	1/4W 1/4W	FUSIBLE FUSIBLE	DBS
Δ	R778	QRZ0077-4R7	4.7	1/4W	FUSIBLE	
<b>A</b>	R779 R780	QRZ0077-4R7 QRZ0077-4R7	4.7	1/4W	FUSIBLE	
⚠	R781	QRZ0077-4R7	4.7	1/4W	FUSIBLE	
Δ.	R782	QRZ0077-4R7	4.7	1/4W	FUSIBLE	
$\Delta$	R783 R784	QRZ0077-4R7 QRZ0077-4R7	4.7	1/4W	FUSIBLE	
▲	R785		4.7 10	1/4W 2W	FUSIBLE O.M.FILM	
Δ	R786	QRG022J-100A	10	2 W	O.M.FILM	
	R787	QRD125J-101 QRD125J-330	100 33	1/2W	UNF.CARBON	
Δ	R787	QRD125J-330	33	1/2W	UNF. CARBON	
Δ	R787	QRD125J-330	33	1/2W	UNF.CARBON	DBS
$\Delta$	R787 R788	QRD125J-330 QRD125J-101	33 100	1/2W 1/2W	UNF.CARBON	
<u>A</u>	R788	QRD125J-330	33	1/2W	UNF.CARBON	
$\Delta$	R788	QRD125J-330	33	1/2W	UNF.CARBON	В
$\triangle$	R788 R788	QRD125J-330 QRD125J-330	33 33	1/2W 1/2W	UNF.CARBON	
	R791	QRD167J-561	560	1/6W	CARBON	-
İ	R792 R793	QRD167J-561	560	1/6W	CARBON	
	R794		560 560	1/6W 1/6W	CARBON	
	R795	QRD167J-221	220	1/6W	CARBON	
	R796 R797		220 180	1/6W	CARBON	
	R798		180	1/6W 1/6W	CARBON	ĺ
Ϋ́	R801	QRD14CJ-330S	33	1/4W	UNF.CARBON	E
⚠	R801 R801	QRZ0077-330 QRZ0077-330	33 33	1/4W 1/4W	FUSIBLE	A
Δ	R801		33	1/4W	FUSIBLE	B C
₫	R801	QRZ0077-330	33	1/4W	FUSIBLE	DBS
4	R802 R802		33 33	1/4W 1/4W	UNF.CARBON FUSIBLE	E A
<u>A</u>	R802		33	1/4W	FUSIBLE	B
4	R802	QRZ0077-330	33	1/4W	FUSIBLE	С
Δ	R802 R803		33 22K	1/4W 1/6W	FUSIBLE CARBON	DBS
	R804			1/6W	CARBON	
Δ.	R811	QRD14CJ-330S	33	1/4W	UNF.CARBON	
Δ	R812 R813			1/4W 1/6W	UNF.CARBON CARBON	
	R814			1/6W	CARBON	
	R816	QRD167J-393		1/6W	CARBON	-
	R817			1/6W 1/6W	CARBON	
	R852			1/6W	CARBON	
	R853				CARBON	
	R854 R855			1/6W 1/6W	CARBON CARBON	
	R856	QRD167J-100	10	1/6W	CARBON	
	R857		10	1/6W	CARBON	
	R858 R901				CARBON CARBON	
	R902	QRD167J-272	2.7K	1/6W	CARBON	
	R903			1/6W	CARBON	
	R904 R905				CARBON CARBON	1
	KY05	QRD167J-104	100K		CARBON   AFETY PAR	TS

#### Resistors

Δ	LTEM	PART NUMBER	DESC	RI	P T 1 O N	AREA
	R906	QRD167J-823	82K	1/6W	CARBON	
	R907	QRD167J-223	22K	1/6W	CARBON	1
	R908	QRD167J-223	22K	1/6W	CARBON	
'	R909	QRD167J-103	10K	1/6W	CARBON	
	R911	QRD167J-473	47K	1/6W	CARBON	
	R912	QRD167J-562	5.6K	1/6W	CARBON	
	R916	QRD167J-103	10K	1/6W	CARBON	
	R917	QRD167J-103	10K	1/6W	CARBON	
	R918	QRD167J-224	220K	1/6W	CARBON	
1	R919	QRD167J-332	3.3K	1/6W	CARBON	
1	R920	QRD167J-393	39K	1/6W	CARBON	
	R921	QRD167J-153	15K	1/6W	CARBON	
	R923	QRD167J-201	200	1/6W	CARBON	
$  \Delta  $	R924	QRG022J-122A	1.2K	2 W	O.M.FILM	

A: SAFETY PARTS

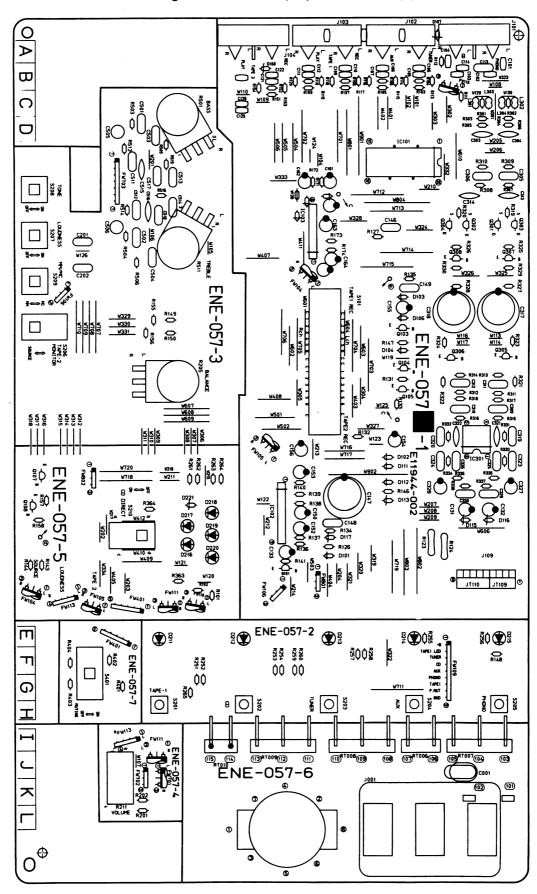
### Others

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Δ	TTEM	1,7	V R T	N I	JMI	S E R	1)	15	S	C	R		۱,	T.	1	()	N.	AREA
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1			G73:				FUS			IF								DBS
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1			367				FUS											E
	1		389				TAE		• · · · ·									Ε
			194				CII				B O A							Α
1			194				CII				BOA							В
1			194				CII				BOA							C
		E 1	194	5-01	03BS		CII											DBS
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			0599				BRA											
l	1		3754				TIE	E										
			5508				TAE											В
			5508				TAE											C
			5508 3945				TAB				,							DBS
ì			1945-		2.5		HEA		SI									
			3525		3		SCR			14 1	•							
			SB30				SCR			••••		••••	• • • • •	• • • • •	••••	•••••		
l			SB30				SCR											
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	J702		/712				CON											_
	J751				301G 301H		SPE				ER			_				E
	J751				301H 301H		SPE SPE				ER							A B
	J751				301H		SPE				ER							C
J	J751				01H		SPE				ER				• • • • •	••••		DBS
	J752	EME	3001	P-8	01G		SPE				ER						-	E
	J752	EME	300T	P-8	801H		SPE				ER						- 1	Ā
	J752				01H		SPE				ER			_				В
	J752				01H		SPE	ΑK	ER	Ţ	ER	ΜI	NΑ	Ļ				. C
	J752				01H		SPE							L				DBS
1	J801		66A4 1712				H E A C O N					A C	K				l	
	J802		1712				CON											
	L701		000				IND											
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	EP002		859 712				EAR				ΙE						- 1	
	J T 7 0 4		712				CON CON										- 1	
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	RT002		764				<b>VRA</b>				TEI							A
	RT003		764				JR A				TEF				••••			В
	RT003	E67	764	- 20	3		VR A			3	TEF	RM:	IN	A L				c
	RT003		764				RAI				TEF						- 1	DBS
	RT004		764				/RAI				TEF							В
	RT004		764				RAI				TEF							C
	RT004 RT005		764 764				RAI				TEF							DBS
	RT801		764				/RAI				TEF							E
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	TP701		500				LU		ASS	Y								- 1
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A: SAFETY PARTS

#### **■** ENE-057 □ Source Selector PC Board Ass'y

Note: ENE-057  $\square$  varies according to the areas employed. See note (1) when placing an order.



#### Note (1)

PC Board Ass'y	Designated Areas
ENE-057 A	the U.S.A., Canada, Australia, the U.K., Continental Europe
ENE-057 B	West Germany
ENE-057 C	Other Countries

#### **Transistors**

A	гтем	PART NUMBER	DESCR	I P T I O N AREA
				MAKER
	Q101	DTA144ES	SILICON	конм
	Q103	2SC2389(S,E)	SILICON	ROHM
1	Q104	DTC144ES	SILICON	ROHM
	Q105	DTA144ES	SILICON	ROHM
	Q107	2803068	SILICON	SANYO
	Q108	2SC3068	SILICON	SANYO
	Q301	2SK170(BL)	F.E.T	TOSHIBA
	Q302	2SK170(BL)	F.E.T	TOSHIBA
	Q303	2SK170(BL)	F.E.T	TOSHIBA
	Q304	2SK170(BL)	F.E.T	TOSHIBA
	Q305	2SD655(E,F)	SILICON	HITACHI
	Q306	2SD655(E,F)	SILICON	HITACHI
1	Q307	2SD655(E,F)	SILICON	HITACHI
	Q308	2SD655(E,F)	SILICON	HITACHI

A : SAFETY PARTS

#### I.C.s

Δ	ГТЕМ	PART NUMBER	DES-CR	IPTION	AREA
_				MAKER	
	I C 1 O 1	LC7818	ı.c.	SANYO	
	I C 1 0 2	TA7317P	I.C.	TOSHIBA	
	IC103	VC4580LD	I.C.	J R C.	
	I C 3 O 1	NJM4560DD	I.C.	J R C	

▲ : SAFETY PARTS

#### Diodes

<b>∆</b> ITEM	PART NUMBER	DESCR	LPTION MAKER	AREA
D102 D103 D104 D106 D107 D108 D111 D112 D113 D115 D116 D117 D211 D212 D213 D214 D215 D216 D217	1SS133 1SS133 1SS133 1SS133 MTZ3.3JB MTZ3.3JB 1SS133 MTZ5.6JC MTZ13JC SLR-331DU70F070 SLR-334VC50F165 SLR-34DC50F165 SLR-34DC50F165 SLR-34DC50F165	SILICON SILICON SILICON SILICON ZENER ZENER SILICON ZENER ZENER ZENER ZENER L.E.D. L.E.D. L.E.D. L.E.D. L.E.D. L.E.D. L.E.D.	M M M M M M M M M M M M M M M M M M M	

A : SAFETY PARTS

#### Capacitors

<b>∆</b> Ітем	PART NUMBER	DESC	R I	иттои	ΛRΕΛ
1 1 1		0.01MF	1	CERAMIC	С
C101	QCBB1HK-471	470PF	50V	CERAMIC	В
C102	QCBB1HK-471	470PF	50V	CERAMIC	В
C103	QCBB1HK-471	470PF	50°V	CERAMIC	В
C104	QCBB1HK-471	470PF	50V	CERAMIC	В

A : SAFETY PARTS

#### Capacitors

<u>va</u>	paci	1013	,			·
Δ	LTEM	PART NUMBER	DESC	R I	PTION	ΛRΕΛ
	C105	QCBB1HK-221	220PF	50V	CERAMIC	В
	C106	QCBB1HK-221	220PF	50V	CERAMIC	В
	C107	QCBB1HK-221	220PF 220PF	50V 50V	CERAMIC	B
1	C108	QCBB1HK-221 QCBB1HK-221	220PF	50V 50V	CERAMIC	В
	C110	QCBB1HK-221	220PF	50V	CERAMIC	В
	C111	QCBB1HK-221	220PF	50V	CERAMIC	В
l	C112	QCBB1HK-221	220PF	50V	CERAMIC	В
	C113	QFV81HJ-103	0.01MF	50 V	T.FILM	
	C114	QCHB1EZ-223 QCBB1HK-221	0.022MF 220PF	25V 50V	CERAMIC	В
1	C122	QCBB1HK-221	220PF	50V	CERAMIC	В
l	C125	QCBB1HK-221	220PF	50V	CERAMIC	В
	C126	QCBB1HK-221	220PF	50V	CERAMIC	В
	C131	QETB1EM-107	100MF	25V	ELECTRO	
	C132	QETB1EM-107	100MF	25V	ELECTRO	
l	C133	QETB1EM-106 QFN81HJ-562	10MF 5600PF	25V 50V	ELECTRO Mylar	
l	C147	QETBOJM-228	2200MF	6.30	ELECTRO	
	C148		5600PF	50V	MYLAR	
	C149	QFN81HK-473	0.047MF	50V	MYLAR	
	C150	QETB1HM-225	2.2MF	50V	ELECTRO	
	C152	QETB1CM-226 QETB1HM-475	22MF 4.7MF	16V 50V	ELECTRO ELECTRO	
	C154	QETB1CM-107	100MF	167	ELECTRO	
	C155	QETB1HM-474	0.47MF	50V	ELECTRO	
1	C156	QETB1HM-475	4.7MF	50V	ELECTRO	
	C161	EEZ5009-106	10MF		ELECTRO	
	C162	EEZ5009-106 EEZ5009-106	10MF 10MF		ELECTRO	
	C164	EEZ5009-106	10MF		ELECTRO ELECTRO	
ļ	C201	QFV81HJ-333	0.033MF	50V	T.FILM	
l	C202	QFV81HJ-333	0.033MF	50V	T.FILM	
l	C303		150PF	500	CERAMIC	
	C304	QCS21HJ-151 QFN81HK-103	150PF 0.01MF	50V 50V	CERAMIC MYLAR	
	C306	QFN81HK-103	0.01MF	50V	MYLAR	
1	C309	QFN81HK-392	3900PF	50V	MYLAR	
	C310		1	50V	MYLAR	
	C311	QFN81HK-822 QFN81HK-822	8200PF 8200PF	50V 50V	MYLAR MYLAR	
	C313	QCS21HJ-101	100PF	50V	CERAMIC	В
	C313	QCS21HJ-680	68PF	50V	CERAMIC	Α
	C313	QCS21HJ-680	68PF	50V	CERAMIC	C
	C314	QCS21HJ-101 QCS21HJ-680	100PF 68PF	50V 50V	CERAMIC	B
	C314		68PF	50V	CERAMIC	Ĉ
	C317	QETBOJM-228	2200MF	6.30	ELECTRO	
	C318		2200MF	6.3V	ELECTRO	
	C319	QFN81HJ-472	4700PF	50V	MYLAR	l
	C320		4700PF 330PF	50V 50V	MYLAR CERAMIC	
	C322		330PF	50V	CERAMIC	
	C323	QFN81HJ-153	0.015MF	50V	MYLAR	
	C324	QFN81HJ-153	0.015MF	50V	MYLAR	
	C325		2700PF 2700PF	50V 50V	MYLAR MYLAR	
	C327		10MF	100V	ELECTRO	
	C328	EETB2AM-106E	10MF	100V	ELECTRO	
	C329	QFN81HJ-222	2200PF	50V	MYLAR	В
1	C330 C501		2200PF 0.015MF	50V 50V	MYLAR MYLAR	В
1	C501		0.015MF	50V 50V	MYLAR	
	C503	QFN81HK-823	0.082MF	50V	MYLAR	
	C504		0.082MF	50V	MYLAR	
	C505		4.7MF	50V	NON POLE NON POLE	
-	C506 C511		4.7MF 3300PF	50V 50V	MYLAR	
	C512	QFN81HK-332	3300PF	50V	MYLAR	
	C513	QFN81HK-183	0.018MF	50V	MYLAR	
	C514		0.018MF	50V	MYLAR	
1	C515 C516		220PF 220PF	50V 50V	CERAMIC	
	C517		1200PF	50V	MYLAR	
L	C518		1200PF	50V	MYLAR	
			Æ	\ : S	AFETY PAR	TS

#### Resistors

	31310	-														_	
Æ	ГТЕМ	PART	NUMB	E R	D	Е	s	С	R	ı	þ	т	l	0	N	A I	E
	R101	QRD167	J-105	1	. M			1	17	6 W	c.	ARE	301	V			
	R102	QRD167	J-105	1	M			ŀ	1/	6 W	C	ARE	301	٧		1	
	R103	QRD167	J-105	1	M			1	17	6 W	C	ARE	108	٧		1.	
1	R104	QRD167	J-105	12	М			1:	17	6 W	lc /	ARE	108	٧			
	R105	QRD167	J-105	1	M			1	17	6 W	c	ARE	108	٧			
	R106	QRD167	J-105	1	LΜ			· :	17	6 W	lc i	ARE	108	٧			
	R107	QRD167	J-105	12	M			1	17	6 W	lc /	ARE	108	V			

#### Resistors

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	LTEM	PART NUMBER	DESC	k i	PTIONA	REA
	R108				CARBON	
	R109	QRD167J-105 QRD167J-105	1 M	1/6W	CARBON	
	R110		1 M		CARBON	
	R111	QRD167J-471	470	1/6W	CARBON	
	R112 R113	QRD167J-471 QRD167J-471	470 470	1/6W 1/6W	CARBON	
	R114	QRD167J-471	1		CARBON	
ļ	R115			1/6W	CARBON	
	R116	QRD167J-471	470 470	1/6W 1/6W	CARBON	
	R117 R118	QRD167J-471 QRD167J-471			CARBON	
	R119	QRD1671-471			CARBON	
	R120	QRD167J-471	470	1/6W	CARBON	
Δ	R123 R124	QRZ0077-101 QRZ0077-101	100 100	1/4W 1/4W	FUSIBLE FUSIBLE	
43	R126	QRD167J-104			CARBON	
	R127	QRD167J-104		1/6W	CARBON	
	R131	QRD167J-103		1/6W	CARBON	
	R132	QRD167J-103 QRD167J-102	10K 1K	1/6W 1/6W	CARBON	
	R134			1/6W	CARBON	
	R135		1		CARBON	
ļ	R136	QRD167J-562	5.6K	1/6W	CARBON	
	R137		47K	1/6W	CARBON	
	R138		3.9K 100K	1/6W 1/6W	CARBON	
	R140		100K	1/6W	CARBON	
	R141	QRD167J-223	22K	1/6W	CARBON	
	R143	QRD167J-102	1 K	1/6W	CARBON	
	R144	QRD167J-102 QRD167J-122		1/6W 1/6W	CARBON	
	R140		1.2K 47K	1/6W	CARBON	
	R148		27K	1/6W	CARBON	
	R149	QRD167J-471	470	1/6W	CARBON	
	R150	QRD167J-471	l .	1/6W	CARBON	
	R151 R152	QRD167J-105 QRD167J-105	1 M 1 M	1/6W 1/6W	CARBON	
	R153	QRD167J-471	470	i	CARBON	
	R154	QRD167J-471	470	1/6W	CARBON	
	R155				CARBON	
	R156	QRD167J-105 QRD167J-333		1/6W 1/6W	CARBON	
	R158	QRD167J-333		1/6W	CARBON	
	R171	QRD167J-473	47K	1/6W	CARBON	
	R172	QRD167J-473	1	1	CARBON	
	R173	QRD167J-474 QRD167J-474	470K 470K	1/6W 1/6W	CARBON	
1	R201	QRD167J-223	22K	1/6W	CARBON	
1	R202	QRD167J-223	22K	1/6W	CARBON	
	R205		250K		VARIABLE	
	R211	i	250K 1.2K	1/6W	VARIABLE CARBON	
	R252		1.2K	1/6W	CARBON	
,	R253	QRD167J-122	1.2K	1/6W	CARBON	
	R254		1.2K	1/6W	CARBON	
	R255		1.2K 1.2K	1/6W 1/6W	CARBON	
	R257		1.2K	1/6W	CARBON	
	R258		1.2K	1/6W	CARBON	
	R259		1.2K	1/6W	CARBON	
	R260	QRD167J-122	m 2V		0.00000	
1	1 2264	1	1.2K	1/6W	CARBON	
	R261	QRD167J-122	1.2K	1/6W	CARBON CARBON CARBON	
	R261 R262 R263	QRD167J-122 QRD167J-112 QRD167J-102	1.2K 1.1K 1K		CARBON CARBON CARBON	
	R262 R263 R264	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-122	1.2K 1.1K 1K 1.2K	1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON	
	R262 R263 R264 R265	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-122 QRD167J-104	1.2K 1.1K 1K 1.2K 100K	1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON	
	R262 R263 R264 R265 R301	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-122 QRD167J-124 QRD167J-331	1.2K 1.1K 1K 1.2K 100K 330	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON CARBON CARBON	B B
	R262 R263 R264 R265	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-122 QRD167J-124 QRD167J-331 QRD167J-331	1.2K 1.1K 1K 1.2K 100K	1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON	B B
	R262 R264 R264 R265 R301 R302	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-122 QRD167J-104 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473	1.2K 1.1K 1.2K 100K 330 330 47K 47K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON	
	R262 R264 R264 R265 R301 R302 R304 R305	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-473	1.2K 1.1K 1.2K 100K 330 330 47K 47K 470	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON	
	R262 R264 R264 R265 R301 R302 R304 R305 R306	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471	1.2K 1.1K 1.2K 1.00K 330 330 47K 47K 470	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON	
	R262 R264 R264 R265 R301 R302 R304 R305	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-471 QRD167J-5R6	1.2K 1.1K 1.2K 1.00K 330 330 47K 47K 470 470 5.6	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON CARBON	
	R262 R263 R264 R265 R301 R302 R304 R305 R306 R307	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-471 QRD167J-586	1.2K 1.1K 1K 100K 330 330 47K 47K 470 470 5.6	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON	
	R262 R263 R264 R265 R301 R302 R304 R306 R306 R307 R308 R309 R310	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-5R6 QRD167J-5R6 QRD167J-5R6 QRD167J-101 QRD167J-101	1.2K 1.1K 1.2K 100K 330 47K 47K 470 5.6 5.6 100	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R262 R263 R264 R265 R301 R302 R304 R306 R306 R307 R308 R309 R310	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-5R6 QRD167J-5R6 QRD167J-5R6 QRD167J-101 QRD167J-101 QRD167J-101 QRD167J-562	1.2K 1.1K 1K 1C 100K 330 47K 47K 47C 47C 5.6 100 100 15.6K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R262 R263 R264 R265 R301 R302 R303 R306 R307 R308 R308 R311 R311	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-101 QRD167J-101 QRD167J-101 QRD167J-101 QRD167J-562 QRD167J-562	1.2K 1.1K 1K 1 .2K 100K 330 37K 47K 47K 47O 47O 5.6 5.6 100 100 100	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON	
	R262 R263 R264 R265 R301 R302 R304 R306 R306 R307 R308 R309 R310	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-471 QRD167J-5R6 QRD167J-5R6 QRD167J-101 QRD167J-101 QRD167J-562 QRD167J-562 QRD167J-562	1.2K 1.1K 1K 1C 100K 330 47K 47K 47C 47C 5.6 100 100 15.6K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R262 R263 R264 R265 R301 R303 R304 R305 R306 R307 R308 R309 R311 R312	QRD167J-122 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-101 QRD167J-101 QRD167J-562 QRD167J-562 QRD167J-270 QRD167J-270 QRD167J-561	1.2K 1.1K 11.2K 100K 330 47K 47K 47O 5.6 100 100 5.6K 5.6K 27 560	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R262 R263 R2645 R3012 R302 R303 R304 R307 R308 R307 R308 R311 R3112 R3113 R314 R315	QRD167J-122 QRD167J-102 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-101 QRD167J-101 QRD167J-101 QRD167J-101 QRD167J-562 QRD167J-562 QRD167J-270 QRD167J-270 QRD167J-270 QRD167J-270 QRD167J-270 QRD167J-561 QRD167J-561	1.2K 1.1K 1.2K 100K 3330 47K 470 470 5.6 5.6 100 100 5.6K 27 27 27 560 560	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON	
	R262 R263 R265 R301 R302 R303 R306 R306 R306 R310 R311 R311 R311 R313	QRD167J-122 QRD167J-112 QRD167J-112 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-101 QRD167J-101 QRD167J-562 QRD167J-562 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-561	1.2K 1.1K 1.2K 100K 3330 47K 47K 470 5.6 5.6 5.6 5.6 5.6K 27 27 560 5.6K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R262 R263 R265 R301 R302 R303 R306 R306 R307 R306 R310 R3114 R3115 R3117 R3117 R3117 R3117 R3117	QRD167J-122 QRD167J-112 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-101 QRD167J-562 QRD167J-562 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-562 QRD167J-562 QRD167J-562	1.2K 1.1K 1.2K 100K 3330 47K 470 470 5.6 5.6 100 100 5.6K 27 27 27 560 560	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	CARBON CARBON	
	R262 R263 R265 R301 R302 R303 R306 R306 R306 R310 R311 R311 R311 R313	QRD167J-122 QRD167J-102 QRD167J-102 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-101 QRD167J-101 QRD167J-562 QRD167J-562 QRD167J-270 QRD167J-270 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562	1.2K 1.1K 1.2K 100K 3330 47K 47K 47C 47O 5.6 5.6 5.6 5.6 27 27 560 5.6K 2.7 5.6K 2.2K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R263 R263 R2651 R3005 R3005 R3007 R3009 R3111 R3113 R3115 R3117 R3117 R312 R312 R312 R312 R312 R312 R312 R312	QRD167J-122 QRD167J-112 QRD167J-112 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-586 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-522 QRD167J-222 QRD167J-222	1.2K 1.1K 11.2K 100K 330 47K 47K 470 5.6 5.6 100 100 5.6K 5.7 5.6 5.6 27 5.6 5.6 27 5.6 5.6 2.2K 2.2K 2.7K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	
	R262 R263 R265 R3002 R3002 R3005 R3006 R3009 R310 R3112 R3113 R3114 R3116 R3117 R3118 R312	QRD167J-122 QRD167J-112 QRD167J-112 QRD167J-102 QRD167J-104 QRD167J-331 QRD167J-473 QRD167J-473 QRD167J-471 QRD167J-471 QRD167J-586 QRD167J-586 QRD167J-586 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-561 QRD167J-561 QRD167J-561 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-562 QRD167J-522 QRD167J-222 QRD167J-222	1.2K 1.1K 11.2K 100K 330 47K 470 5.6 5.6 100 100 5.6K 5.6K 227 560 5.6K 2.2K 2.2K 2.7K	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	C A R B O N C A R B O N	В

#### Resistors

$\Lambda$	ітем	PART NUMBER	DESC	CRI	ртіо	N	AREA
-	R323	QRD167J-273	27K	1/6W	CARBON		
	R324		27K		CARBON		1
1	R325		27K	1/6W	CARBON		
1		QRD167J-273	27K	1/6W	CARBON		
		QRD167J-180	18	1/6W	CARBON		i
		QRD167J-180	18	1/6W	CARBON		
1	R329	QRD167J-221	220	1/6W	CARBON		
	R330		220	1/6W	CARBON		
1		QRD167J-153	15K	1/6W	CARBON		1
		QRD167J-153	15K	1/6W	CARBON		
	R333	QRD167J-184	180K	1/6W	CARBON		
1	R334	QRD167J-184	180K	1/6W	CARBON		1
	R335	QRD167J-471	470	1/6W	CARBON		
	R336	QRD167J-471	470	1/6W	CARBON		
1	R337	QRD167J-104	100K	1/6W	CARBON		
	R338	QRD167J-104	100K	1/6W	CARBON		ĺ
	R363	QRD167J-471	470	1/6W	CARBON		
	R364	QRD167J-471	470	1/6W	CARBON		
1	R501	QVDB87C-E15B	100K	1	VARIABL	E	1
1	R503	QRD167J-203	20K		CARBON		
1	R504	QRD167J-203	20K	1/6W	CARBON		
	R505	QRD167J-362	3.6K		CARBON		
	R506	QRD167J-362	3.6K	1/6W	CARBON		
	R511		100K		VARIABL	Ε	
1	R513	QRD167J-472	4.7K	1/6W	CARBON		
1	R514	QRD167J-472	4.7K		CARBON		
1	R515	QRD167J-821	820		CARBON		
1	R516	QRD167J-821	820	1/6W	CARBON		

A: SAFETY PARTS

#### Others

	ners ITEM	PART NUMBER	DESCRIPTION	AREA
ш	1 1 L W	TAKI NOMBER		
	1	E11944-003	CIRCUIT BOARD	
		E305983-001	HOLDER	
		E65508-002	TAB	_
Δ		QSR0085-009	VOLTAGE SELECTOR	C
Δ	J001	QMC0637-004	AC OUTLET	C
	J101	EMNOOTV-408A	4P PIN JACK	
	J102		4P PIN JACK	
	J103		4P PIN JACK	
	J104		4P PIN JACK	_
	L301	EQL4004-270	INDUCTOR	B
	L302	EQL4004-270	INDUCTOR	В
	L303	EQL4004-220	INDUCTOR	В
	L304	EQL4004-220	INDUCTOR	В
į	\$101	QSS1J46-E01	SLIDE SWITCH	1
		ESP0001-018	TACT SWITCH	
	8202	ESP0001-018	TACT SWITCH	l
	S203		TACT SWITCH	ļ
	S204	ESP0001-018	TACT SWITCH	l
	S205		TACT SWITCH	
	\$206		PUSH SWITCH	
	S210		PUSH SWITCH	
	FW104		FLAT WIRE	
	FW105		FLAT WIRE	
	FW106		FLAT WIRE	
	FW109		FLAT WIRE	
	1	EWR23C-40NN	FLAT WIRE	
	FW111	EWR23C-16NN	FLAT WIRE	ĺ
	FW113		FLAT WIRE	
	FW701		FLAT WIRE	
	FW702		FLAT WIRE	
	FW703	EWR37B-40LST	FLAT WIRE	1
	FW801	EWR33B-10LST	FLAT WIRE	
	FW802		FLAT WIRE	l
	JT109		CONNECTOR	l
	JT110		CONNECTOR	
	RT006		WRAPPING TERMINAL	С
	RT007		WRAPPING TERMINAL	С
	RT008		WRAPPING TERMINAL	С
	RT009		WRAPPING TERMINAL	C
	RT010	E67764-402	WRAPPING TERMINAL	
			A · SAFETY PAR	T.S.

A : SAFETY PARTS

### **Accessories List**

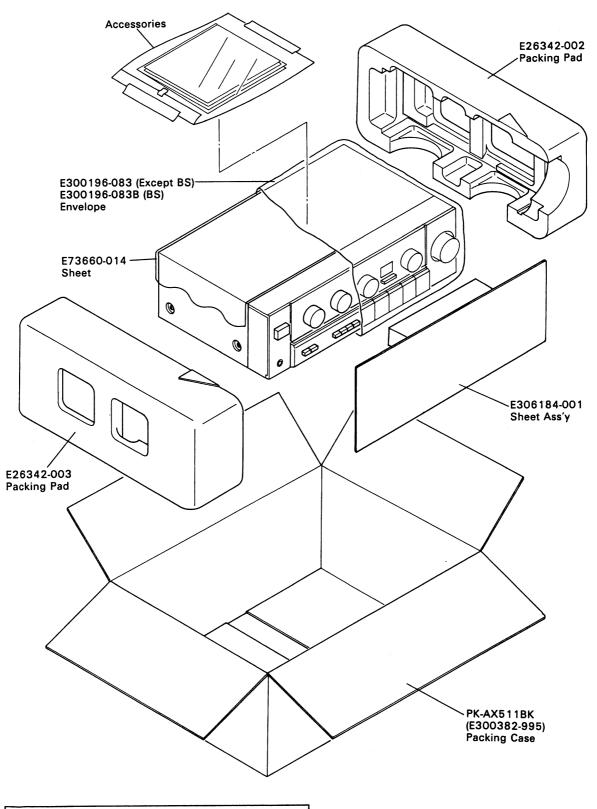
$\triangle$	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1518A	Instruction Book	1		Except BS
1	E30580-1518ABS	Instruction Book	1	ĺ	BS
1	BT-20048C	Warranty Card	1		,
	BT-20025K	Warranty Card	1		C
	BT20029C	Warranty Card	1		Α
	BT-20064A	Warranty Card	1		G
	BT20060	Warranty Card	1	1	BS
	BT20108	Service Imfomation Card	1		j l
	BT20044F	Safety Instruction Sheet	1	ļ	J
	BT20071A	Service Center List	1		С
	BT20066A	ECC Agency	1		G,BS
	ВТ20098	Audio Warranty	1	for New Zealand	Α
	QZL1008-001	FTZ Imfomation Sheet	1		G
	E72360-001	Caution Sheet	1		C
	E35497-019	Caution Sheet	1	220V	U
	E43486-340A	Safety Sheet	1		BS
$\triangle$	E04056	Siemens Plug	1		υ
	E66416-003	Envelope	1	for Warranty Card	j
	E41202-2	Envelope	- 1	for Instruction Book	Except BS
	E41202-2B	Envelope	1	for Instruction Book	BS

 $\triangle$  Safety Parts

#### The Marks for Designated Areas

J·····the U.S.A.	G······West Germany
C·····Canada	BS·····the U.K.
E,EFContinental Europe	UOther Countries
ΔΔustralia	No mark indicates all areas.

## **Packing Materials and Part Numbers**



The Marks for Designated Areas			
JCanada E,EFContinental Europe AAustralia	GWest Germany BSthe U.K. UOther Countries No mark indicates all areas.		